

A woman is sliding down a large, green, triangular ramp that is part of an interior installation. The ramp is covered in a textured green material. In the background, a woman is sitting at a wooden table in a public interior space, possibly a cafe or library, with large windows and indoor plants. The overall scene is brightly lit and modern.

# Public Thresholds

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Activating Existing Public Interiors  
through Spatial Experimentation

**Mar Muñoz Aparici**



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## Activating Existing Public Interiors through Spatial Experimentation

Dissertation

for the purpose of obtaining the degree of doctor  
at Delft University of Technology  
by the authority of the Rector Magnificus,  
Prof.dr.ir. H. Bijl,  
chair of the Board for Doctorates  
to be defended publicly on  
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by

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To my father, Manuel, el Marqués de Ravaxol



# Preface

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This dissertation departs from the conviction that architects and urban designers can positively contribute to the urban challenges of our time when they focus on citizens and the common good. Embedded both in the Architecture and Urbanism departments of the faculty of Architecture and the Built Environment at the Delft University of Technology, what started as an intuition during the author's graduation thesis in 2016 gradually developed into the current doctoral exploration.

In the period 2021-2026, the research unfolded under the umbrella of the CA2RE network, which was crucial for its development by ensuring support, rigour, and reflection. Attending its conferences to receive feedback and connect with other researchers driven by design provided the author with an invaluable community of practice and a continuous research output.

Based on the professional practice of the author, called *lamardebe*, some experiments were developed as professional assignments tailored to the research aims. However, it must be noted that the design experiments presented are a curated selection of the body of work developed during the research timeframe. Experiments were included here based on their relevance and contribution to the research question. Therefore, the research often unfolded in a non-linear way depending on the contingencies of real-life practice as opposed to controlled environments or theoretical research.

Because this dissertation is a design-driven, practice-based study conducted by a self-funded candidate, its experiments were funded by public and private parties, either through research projects or as design fees to the author. Properly explicated, this enriches the research by including the actual restrictions and conditions of the design processes.

Chapter 2, "Overcoming Disciplinary Stupidity", was published in a peer-reviewed journal and written in collaboration with copromotor Maurice Hartevelde. Chapter 3 on *Makerlab* presents findings developed in a research project granted by Stichting PICA, which produced complementary output publications described in the List of Publications. Throughout the CA2RE conferences, intermediate results of this research were presented and published as snapshots of a work-in-progress. The *Limen* experiment was funded and operationally supported by the Museum Boijmans

van Beuningen and Placebased. In fact, all design projects were collaboratively developed with other designers, researchers, citizens, or clients, making this dissertation a collective product.

Although now seemingly distant in time, a large part of the experimental research occurred during the COVID-19 pandemic, with its consequent effects on public space and general life. This limitation has been acknowledged where appropriate.

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Although a dissertation's authorship is individual, it takes a village to do a PhD, and this work was no exception. I would like to thank the many people who have believed in, encouraged and supported me over the years.

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In addition, my research has been partially funded by various bodies, projects, and clients. During the MAKERLAB project, funded by Stichting PICA for the National Library of the Netherlands, Dr Olindo Caso was a true sparring partner, a master who became a friend. Also, I am grateful to the many people, places and situations I got to know across the country in that time, which defined and redefined my designerly ways of doing as a relational, embedded and embodied practitioner.

A turning point in my research was meeting Dr Lisa Heinis from Museum Boijmans van Beuningen, who, from the beginning, believed in the transdisciplinary power of having an architect explore the idea of the threshold within an art institution. Her complicity and credit boosted and expanded my research, leading to what I believe was a paradigmatic example of what my dissertation sought to do: the Limen experiment.

I have been lucky enough to be embedded in a research ecosystem, the Architecture and the Built Environment Faculty in TU Delft, surrounded by extraordinary colleagues whom I have learned from and with. Stavros Kousoulas and Andrej Radman have critically expanded the limits of my understanding while creating a true ecology of care in their courses. Conversations and exchanges with peers Stefan Gzyl, Ran Pan, Taufan ter Weel, Elena Puig Guembe and Soscha Monteiro created encouragement and relief throughout the inevitable challenges and moments of progress that shaped this PhD trajectory.

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# Contents

---

List of Figures	15
Summary	21
Samenvatting	25

---

## 1 Introduction 28

1.1	<b>Public Space in Late Modernity: Challenging Disciplinary and Epistemic Dichotomies</b>	30
1.2	<b>Problematising Publicness</b>	32
1.3	<b>Conceptual and Theoretical Grounding</b>	34
1.3.1	Contemporary Conditions of Public Space	35
1.3.2	Publicness: Meanings, Dimensions, Debates	40
1.3.3	Thresholds, Liminality, and Spatial Transitions	43
1.3.4	Investigating publicness in design	46
1.4	<b>Framing the Enquiry: Aims, Questions and Research Objectives</b>	51
1.5	<b>Research Positioning: A Design-Driven Research Approach</b>	53
1.5.1	Contributions to Theory, Methods and Practice	54
1.5.2	Scope and limitations	55
1.6	<b>Structure of the Dissertation</b>	56
1.7	<b>Research Timeline</b>	60

---

## 2 Modes of Enquiry 68

### Ways of Doing and Knowing through Design-Driven Research

2.1	<b>Methodological Positioning</b>	70
2.1.1	Bridging Theory and Practice in Public Space Research	70
2.1.2	Bridging Architecture and Urban Design	72

2.2	<b>Design Research and Architecture</b>	73
2.2.1	From Design Science to Designerly Ways of Knowing	73
2.2.2	Design-Driven Research in Architecture	75
2.3	<b>Research Approach</b>	77
2.3.1	The Designer-Researcher and Situated Agency	77
2.3.2	Critical Reflexivity and Iterative World-Making	78
2.3.3	Personal Design-Driven Research Approach	80
2.4	<b>Research Design</b>	81
2.5	<b>Methods and Tools</b>	83
2.5.1	Collective Creation as a Design-Driven Method	83
2.5.2	Reflexivity and Research Communities	84
2.6	<b>Research Framework and Evaluation Context</b>	86
2.6.1	The CA <sup>2</sup> RE Network: Caring for Design-driven Research	86
2.6.2	A community of Practice and Care: transformative support to the doctoral trajectory	87

---

### 3 **Overcoming Disciplinary Stupidity** 90

Collective Creation for Diversity and Inclusion in Public Space Design

3.1	<b>The challenge of designing public spaces in hyperdiverse cities</b>	92
3.2	<b>Collective creation as collective problematisation</b>	97
3.3	<b>On the designer's capacities to design for diverse public spaces</b>	103
3.4	<b>Success and failure: two sides of the ethico-aesthetic approach</b>	108
3.5	<b>Navigating diversity: recommendations for designing inclusive public spaces</b>	110

---

### 4 **Makerspaces in Public Libraries** 114

Activating Publicness through a Co-created and Multiscalar Design Approach

4.1	<b>Libraries as Evolving Infrastructures for Collective Transformation</b>	118
4.1.1	Background. Cultural buildings in Late Modernity	118
4.1.2	The Transition of the Modern Library	120
4.2	<b>Co-Creation and Design-Driven Research for Public Space Activation</b>	124
4.2.1	Makerspaces, Situated Knowledges and Cultural Values	124
4.2.2	Co-creation as Situated Design Approach	125

- 4.2.3 Framing Co-creation and Design Authorship 127
- 4.2.4 Design Research Process: Reflection and Iteration 128
- 4.2.5 Design Process Steps 129
- 4.2.6 Co-creation Tools 130
- 4.2.7 Design Approach 131
- 4.2.8 Design Experiment. Makerlab Project 132

#### 4.3 **Scaling Publicness: Multiscalar Design for Makerspace Integration in Libraries** 133

- 4.3.1 Urban embeddedness of the library building 134
- 4.3.2 Spatial strategies to activate makerspaces in libraries 135
- 4.3.3 Functional layout: program, position and use 137
- 4.3.4 Spatial Elements: Multiscalar, multimedia and multipurpose 138

#### 4.4 **Towards Libraries as Dynamic Thresholds of Publicness** 140

- 4.5 **Learning by Making: Design Approaches for Adaptive Reuse** 143

### 5 **Sliding Thresholds** 178

---

Experimenting with Liminality to Activate Publicness in Interior Public Space

- 5.1 **Cultural Buildings in Late Modernity: Liminality and Publicness in Cultural Buildings** 182
- 5.2 **Observing, Co-creating and Experimenting with Liminality in Public Space** 184
- 5.3 **Limen: A Spatial Experiment in Public Space Accessibility** 191
- 5.3.1 Zuid. Boijmans van Beuningen: Lowering the Threshold of Art Spaces for Local Communities 191
- 5.3.2 Tracing the Spatial and Behavioural Dynamics of Liminal Publicness 195
- 5.4 **Liminal Transitions and Public Building Accessibility: Insights from a SpatialExperiment** 198
- 5.5 **Rethinking Public Building Design Through Liminal Accessibility** 201

### 6 **Comparative Spatial Experiments** 236

---

Distilling Design Approaches for Publicness Activation

- 6.1 **Critical Spatial Practice Beyond Indoors and Outdoors** 240
- 6.2 **Comparing Situated Experiments: Reflexive and Critical Spatial Practice** 241

6.3	<b>Spatial Designs for Public Space Activation</b>	242
6.3.1	De Hillevliet (Rotterdam, 2022–2023). Collective spatial programming and urban visibility	242
6.3.2	Valencia 360 (Valencia, 2023). Immersive speculative urban futures for civic engagement	245
6.3.3	Agora (Valencia, 2024, unrealised). Creating a public around the 2030 missions	248
6.3.4	Cotes Baixes (Alcoi, 2023–2024). Everyday publicness in educational space	249
6.4	<b>Design Approaches to Activate Publicness</b>	254
6.4.1	Spatial Design	254
6.4.2	Co-creation Processes	255
6.4.3	Institutional Conditions	256
6.4.4	Situatedness & Context	256
6.5	<b>Design as Relational Practice for Public Life</b>	257
6.6	<b>From Strategies to Principles: Activating Publicness through Spatial Design</b>	261
7	<b>Conclusions</b>	290
<hr/>		
	<b>Becoming Public Through Design Practice</b>	
7.1	<b>Consolidating the Findings</b>	292
7.2	<b>Interpreting Publicness Through Practice</b>	293
7.2.1	Publicness as a Threshold Condition	294
7.2.2	Design Factors of Publicness	295
7.2.3	Collective Creation and the Formation of Publics	297
7.2.4	Spatial Experimentation as Mode of Enquiry	299
7.2.5	Practical Design Approaches for Publicness Activation	300
7.2.6	Becoming a “Designer-Researcher”	301
7.3	<b>Boundaries of Situated Design Knowledge</b>	303
7.4	<b>Towards Design Approaches for Publicness</b>	306
	Curriculum Vitae	311
	List of Publications	315

# List of Figures

---

- 1.1 Conceptual reinterpretations of Sloterdijk's theory of spheres connecting them into physical scales of the built environment. Bubbles around citizens are islands that when joined by other bubbles create globes, which can take the form of buildings or cities. 37
- 1.2 Speculative drawing on urban ecologies: a network of affects connecting people, buildings and objects. Design can mediate and regulate those affects. 49
- 1.3 Timeline showing the interconnection of the different layers in the doctoral trajectory. Design projects and experiments, CA2RE+ Events, Publications and output, Graduate School Milestones, and personal highlights. 61
- 2.1 Early conceptual diagram explaining publicness activation experiments in public space. Offering indoor and outdoor affordances that bridge the building's façade expanding the public threshold. 71
- 2.2 Design is the central spine of the study translating between the research and the experiments. 71
- 2.3 Using methods, tools and techniques from multiple disciplines, the research approach in the study is driven by design. Besides co-creation, experimental spatial interventions and literature review, an array of supporting tools and techniques were employed along the trajectory. 72
- 2.4 Research develops between the main stage, where experiments occur, and the back stage, where concepts are turned into questions and premises, and by observing, results are turned into conclusions. 78
- 4.1 The makerspace in Gorredijk's library aspired to become a safe haven for visitors of all kinds. On the one side, machinery and tools; on the other side, a coffee corner that act as a symbiotic pair to attract visitors to engage. 117
- 4.2 Making is simultaneously an individual and collective action because it often requires cooperation. Making activities are inspiring for citizens of all ages, what is called life-long-learning. Image of the Tiel Medialab Makerspace after the intervention. 123
- 4.3 Co-creation is supported by different tools and techniques such as workshops and model-making. Image of a co-creation workshop with library representatives exploring "The ideal future library". 123
- 4.4 In the proposed co-creation tool, a first session focused on mapping the network or ecology followed by a collective early diagnosis of the space or building. 147
- 4.5 Borrowed from marketing and branding, the onion model can be articulated by using adjectives to define the space's personality and progressively translate that to the other layers. 149
- 4.6 Starting with words and only then connecting them with images to create a moodboard clarifies the different meanings words can hold for different people. 151
- 4.7 Model-making is an accessible tool to support participants in thinking spatially and creatively, when properly adapted and guided. 152
- 4.8 Pilot libraries differed in size, location and embeddedness in the urban fabric. Some were embeded in hybrid buildings, other were standalone infrastructures. 155

- 4.9 Instead of delivering finalized floor plans, blueprints propose functional layouts based on the activities to be performed. 157
- 4.10 Makerspaces in existing libraries hold the most transformative power when they are embedded seamlessly in the library, and not tucked away in an enclosed room. 159
- 4.11 Whenever possible, makerspaces should be visible from the street to activate the spatial publicness. In Hilversum the whole makerspace becomes a showcase towards the street. 161
- 4.12 Makerspaces do not necessarily need to be constrained to the interior, the public threshold can be extended to gardens or squares. As in Westland's case. 163
- 4.13 Although each library combined multiple spatial strategies, these schemes show the main ones developed per library. 165
- 4.14 Schematic diagrams are the graphical counter-part of one-liners: a brief explanation of the design intent. 167
- 4.15 Out of all designs for the makerspaces, some elements emerged as relevant artefacts proposing affordances supporting publicness. These elements are multiscalar, multimedia and multipurpose. 169
- 4.16 The relevance of these elements lies in how they contribute to publicness by supporting the spatial strategy and functional layout. 171
- 4.17 Spatial elements supporting publicness activation merge design disciplines such as graphic, interior architecture, landscape or urban design. 173
- 4.18 The future of libraries is in the making: a speculative proposal combining the presented spatial strategies, functional layouts and elements into one library. 175
- 5.1 Sliding into the public interior. A playful way to blur the threshold to engage in public life. 181
- 5.2 De Hillevliet's creative hub location in Rotterdam South, the Netherlands. 192
- 5.3 Entering the building through opposing windows creates an urban shortcut. Instead of proposing a crossing route, the intervention draws people in and invites them to stay in the building. 193
- 5.4 Once inside, the public interior offered activities for citizens to stay. Art workshops, music, exhibitions etc. were expected to invited them to participate in public life. 197
- 5.5 Children lined up to climb the stair leading to the slide. Through repetition and iteration, children presented new ways of using the artefact and produced very valuable data confirming the experiment's validity to test public liminality. 203
- 5.6 Results of the collective creation session with stakeholders. Actor network analysis, spatial diagnosis and finally translating that into a spatial identity forming the starting point for the spatial strategy design. More on the collective creation approach in Chapter 4. 204
- 5.7 In June 18th 2022, a collective creation activity took place in front of de Hillevliet. Citizens were prompted to stop and respond: "What would you do in a museum?", being offered tea and sweets and children were invited to make a model of an ideal art space. 208
- 5.8 Model making appears as a great tool to engage citizens, especially when language is a barrier. In this occasion, refugee students explored how to make the building more accessible. 210
- 5.9 Conceptualizing Sloterdijk's theory of spheres through drawings was the starting point of the limen hypothesis. Drawing is a design tool that helped ground the theory into spatial terms. 211
- 5.10 Early proposal of the inner street crossing the building through the windows. Two opposing slides connected by a carpet lead visitors toward a central exhibition in the entrance hall. 212

- 5.11 From the outside, a colourful stair leading to a window extends into the street. An unexpected object with a bright colour offers an unexpected affordance: to enter a building through a window. 214
- 5.12 The spatial intervention proposed an inner street crossing the building's entrance hall accessed through two slides in opposing windows and connected by a colourful carpet extending into public space. 216
- 5.13 The main artefacts, the slides bridging the windows, were designed by the author but executed by the technical museum team. Final detailing and colour was adapted and negotiated along the process. 218
- 5.14 Slides were made out of wood and varnished in the same hue as the bright green carpet. The conspicuous bright green colour was a contingent decision by the building managers based on the available affordable carpets. 219
- 5.15 During a grey rainy day, such a bright colour broke the monotonous landscape raising citizen's curiosity and attracting them to get closer to the building. Blurring the façade with an artefact that offsets the public threshold towards the city. 220
- 5.16 From a distance, observers noted behaviours around the artefact. The most recurring one were children climbing the ladder and sliding into the building in all possible ways: head-first, in couples, climbing the slide etc. 221
- 5.17 At the top, at the tipping point between the ladder and the slide, citizens stopped to reflect and notice the public life around. 222
- 5.18 Most citizens decided to slide into the building and either engage in the activities or continue through the inner street. Some turned around and did not slide, overwhelmed by public life. 223
- 5.19 Spatial intervention observations from Observer 1 224
- 5.20 Spatial intervention observations from Observer 2 228
- 5.21 Spatial intervention observations from Observer 3 230
- 5.22 Spatial intervention observations from Observer 4 232
- 6.1 Entrance hall IES Cotes Baixes after the first phase of the renovation. A large open space surrounded with a glass façade frames the space as a public threshold, where circulation overlaps with moments of encounter and interaction. Source: ©Carlos Segura 239
- 6.2 Comparative overview of the four spatial experiments around their design parameters, situatedness, and relation to research and practice. 251
- 6.3 Valencia 360 exhibition, immersive installation within Las Naves public innovation centre. Source: ©Lucas Momparler 253
- 6.4 Vestibule of De Hillevliet in 2025, after the project finalisation. Even years after, the strategy to be welcoming in the threshold proves valid. 260
- 6.5 Design programme of requirements for the public space activation strategy resultant from the collective creation process in De Hillevliet. 262
- 6.6 A collection of spatial references resulting from the collective creation workshop on "the entrance threshold" at De Hillevliet. 263
- 6.7 Axonometry drawing depicting the spatial design strategy for the entrance of De Hillevliet. In the vestibule, welcoming seating spaces and an updated agenda. At the hall, an entrance desk to guide visitors, exhibition and presentation spaces, and multiple options for flexible informal seating. 264
- 6.8 Section drawing across the entrance hall in De Hillevliet illustrating the proposed wayfinding and custom-made seating crossing the exhibition, presentation and living spaces. 266

- 6.9 Proposed interventions in the façade of De Hillevliet, main entrance (before and after). A large scale digital board shows the names of the institutions present in the building. 268
- 6.10 Proposed interventions in the façade of De Hillevliet, side view (before and after). A large scale artistic poster board shows the logos of the institutions present in the building. 269
- 6.11 Proposed interventions in the vestibule of De Hillevliet, right side (before and after). Building floor plans with corresponding institutional names act as wayfinding. 270
- 6.12 Proposed interventions in the vestibule of De Hillevliet, left side (before and after). A weekly activity agenda shows visitors where they can participate while the lounge corner welcomes them. 271
- 6.13 Estate of De Hillevliet's interior and exterior in 2025, after the project finalisation. Clearly, some aspects of the spatial strategy were implemented and maintained (vestibule, flexible seating options, lighting, living room feeling, welcoming desk). 272
- 6.14 Drawings of the Valencia 360 exhibition design (axonometry and floor plan). Each 360 image was printed on a hanging fabric wrapped around visitors creating a bubble of immersion into utopic/dystopic futures. Virtual reality glasses, making of videos and posters completed the exhibition. 274
- 6.15 Technical drawing for a 360 exhibition bubble, early dismissed proposal. 276
- 6.16 Person standing in the middle of the immersive bubble presenting the dystopic and utopic urban futures. 276
- 6.17 General view of the Valencia 360 exhibition presenting the exhibition panels, immersive bubbles and VR corner. Source: ©Lucas Momparler 277
- 6.18 Concept drawing for the Agora pavilion design. A ship container opens up as a temporary exhibition space providing a sense of interiority through shadow, delimited flooring and seating options. 278
- 6.19 Situation drawing for the Agora pavilion design located besides the gate at the gardens of Universitat de València in the Tarongers Campus to attract students to visit and interact with the intervention. 279
- 6.20 Main image wrapping the Agora pavilion on "knowledge transfer". Citizens appear in the middle, reflected on a mirror connected in a web, overlaid with the map of the city as a knowledge transfer system the university and the city placing citizens in the centre. 280
- 6.21 Spatial intervention proposal for Agora. A pavilion made from a recycled ship container that hosts an exhibition and meeting space around a provocative speculative image on knowledge transfer between university and city. 281
- 6.22 User experience journey of a prospective student approaching the IES Cotes Baixes. From the first impression of the centre through publicity to an interview with a career coach, the spatial milestones accompany the public experience. 282
- 6.23 Spatial journey and milestones of a prospective student approaching IES Cotes Baixes. A visitor to the centre crosses the exterior and interior spaces in a continuous public experience supported by technology. 283
- 6.24 Phase 1 of the Cotes Baixes project introduced a new entrance hall a student cantine and renewed teacher cafeteria and offices. A welcoming space that better represents the education community's values of technology and transparency in a comfortable interior. 284
- 6.25 Render showing the design intention to extend the public threshold from the school towards the city with artefacts combining digital installations and seating. 285

- 6.26 Cotes Baixes' entrance hall combines modern interior materials with a welcoming furnishing. The differences between the rendering and the realized design show how design iterations sharpened and improved the spatial design. 286
- 6.27 The student canteen became the heart of the public experience in Cotes Baixes. A space for presentations, meetings, lunch, games or theatre plays, thanks to a balance between fixed and adaptable elements. Source: ©Carlos Segura 287



# Summary

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Activating public life in public spaces remains a persistent interest in architecture and urban design, particularly in the context of late modernity, which is characterised by change, shifting reference points, and blurring divisions between the private and public realms. While public spaces are widely acknowledged as essential for social interaction, how to design inclusive spaces remains a challenge for design practice. In response, architecture and urban design discourses have gradually shifted away from fixed and typological definitions of public space towards more dynamic understandings of publicness. This shift recognises that public life does not occur in predefined spaces: it emerges through relations between people, spaces, objects, and institutions, unfolding across both exterior and interior environments.

In this broader shift towards public life, public interiors such as libraries and museums have drawn particular attention from design and practice alike. Public interiors are expected to host public life yet often struggle to do so. While public space theory has developed increasingly nuanced conceptualisations of publicness, and public space practice has adopted a wide range of tools to include citizens (i.e. participatory tools, co-design, or placemaking), designers continue to face difficulties in intentionally activating publicness in public interiors. Existing public interiors therefore constitute a critical yet under-explored case for publicness activation.

Despite the growing recognition of spatial publicness as a dynamic condition, there is limited understanding of how architects can operationalise publicness through design practice in concrete, situated contexts. In particular, it remains unclear how design approaches, understood as integrated ways of thinking and doing, can support the processes of public space activation. This gap motivates the central research question of this study: how can design approaches activate publicness in existing public interiors?

Adopting design-driven research (DDR) as an operative backbone, the study positions design as a legitimate mode of enquiry by using tools, techniques, and approaches natural to design practice. A series of situated spatial experiments investigated the theoretical hypotheses emerging from this design-driven enquiry. Emanating from collective creation actions, designs evolved to become temporary spatial interventions, including artefacts or unrealised speculative design proposals,

across different institutional and spatial contexts. In this experimental design approach, the author operates both as a designer and a researcher embedded within the experiments, which is a privileged condition for knowledge production. Knowledge emerges here iteratively through cycles of design, experimentation, observation, and critical reflexivity. Reflexivity turns tacit design decisions into explicit insights and situated findings within their specific contexts into transferable design approaches.

Pivoting on design approaches, this study argues that publicness can be activated when designers operate through relational, embodied, and embedded approaches that align spatial transformation with social engagement. In this perspective, collective creation emerges as a tool to engage citizens in constituting publics around their shared matters of care to collectively problematise them. During the pre-design phase, co-creation is the first step towards spatial transformation, creating a sense of collective ownership. Using collective problematisation from co-creation as input, designers galvanise spatial aspirations into design processes.

Research insights arise from a coherent body of design-driven spatial experiments developed during the doctoral trajectory: Makerlab, Limen, De Hillevliet, Agora, Valencia 360, and Cotes Baixes. With different locations, contexts, scales, degrees of implementation, and institutional settings, experiments range from interior design interventions to architectural design projects operating at the urban scale. Such diversity allows for a productive cross-comparison to identify recurring patterns which could not be revealed through a single experiment or type of experiment. Jointly, the experiments probe how publicness is activated by design under different spatial, social, and institutional conditions.

Across the experiments, core findings surfaced. First, publicness in existing public interiors emerged not as a fixed spatial attribute but as a dynamic threshold condition showing a parallelism with liminality as a spatial transition, which can be shaped by spatial design factors. Then, the experiments proved that collective creation operates as a mechanism for forming publics around shared matters of care, enabling publicness to be articulated before its spatialisation. In practice, design-driven spatial experimentation functions as a mode of enquiry through which theoretical hypotheses about publicness can be tested in real-life contexts. These findings point toward design approaches that integrate co-creation, spatial experimentation, and relational perspectives. Finally, it emerged clearly that when designers operate following such relational, embodied and embedded design-driven approaches, they become-designer-researcher: they transform space and space transforms them.

Confirming the epistemic value of design-driven spatial experimentation as a mode of enquiry, the experiments demonstrate that knowledge about publicness can emerge through design itself, whether in the form of spatial interventions, artefacts, or speculative designs. Often considered limitations in architectural practice, iteration and temporality proved to be strengths in this approach because they enabled testing and adaptation to contingency. It was through critical reflexivity that the situated and tacit knowledges from the experiments were articulated into productive insight.

Altogether, these findings contribute to public space discourse by re-framing public space activation as a matter of design approaches. Conceptually, this dissertation advances an understanding of publicness as a dynamic condition conceptualised as a threshold following the stages of liminality. Methodologically, it demonstrates how design-driven spatial experimentation can generate rigorous, situated knowledges about public life in space. For design practice, the research offers design approaches that can be transferred to other contexts by adapting these ways of doing to new contexts, enabling architects to design publicness in existing public interiors.



# Samenvatting

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Activatie van het openbare leven in publieke ruimte blijft een aandachtspunt binnen architectuur en stedenbouw, met name in de context van de late moderne tijd, waarin verandering, verschuivende referentiepunten en vervagende grenzen tussen privé en publiek centraal staan. Publieke ruimte wordt algemeen erkend als essentieel voor sociale interactie, maar het ontwerpen van inclusieve ruimtes blijft een uitdaging in de praktijk. Als reactie hierop zijn de discussies over architectuur en stedenbouw geleidelijk verschoven van vaste en typologische definities van publieke ruimte naar een meer dynamisch begrip van publiekheid. Deze verschuiving erkent dat het openbare leven zich niet afspeelt in vooraf gedefinieerde ruimtes: het ontstaat door relaties tussen mensen, ruimtes, objecten en instellingen, en ontvouwt zich zowel in de buiten- als in de binnenomgeving.

In deze bredere verschuiving naar het openbare leven hebben publieke interieurs zoals bibliotheken en musea bijzondere aandacht gekregen vanuit zowel de ontwerpwereld als de praktijk. Van publieke interieurs wordt verwacht dat ze het publieke leven huisvesten, maar vaak blijkt dat lastig. Hoewel de theorie steeds genuanceerdere begrippen van publiekheid heeft ontwikkeld en de praktijk een breed scala aan instrumenten heeft ingezet om burgers te betrekken (bijvoorbeeld participatieve instrumenten, co-ontwerp of placemaking), blijven ontwerpers moeite hebben om publiekheid in publieke interieurs bewust te activeren. Bestaande publieke interieurs vormen daarom een cruciaal maar onderbelicht onderwerp voor het activeren van openbaarheid.

Ondanks de groeiende erkenning van ruimtelijke publiekheid als een dynamische conditie, is er nog maar weinig kennis over hoe architecten publiekheid kunnen operationaliseren door middel van ontwerppraktijken in concrete, specifieke contexten. Er is met name nog onduidelijk hoe ontwerpbenaderingen, gezien als geïntegreerde manieren van denken en doen, het proces van activering van de publieke ruimte kunnen ondersteunen. Deze leemte vormt de aanleiding voor de centrale onderzoeksvraag: hoe kunnen ontwerpbenaderingen publiekheid activeren in bestaande publieke interieurs?

Met design-driven research (DDR) als operationele pijler positioneert het onderzoek ontwerp als een legitieme onderzoeksmethode door gebruik te maken van instrumenten, technieken en benaderingen die van nature deel uitmaken van de ontwerppraktijk.

Aan de hand van een reeks gesitueerde ruimtelijke experimenten worden de theoretische hypothesen onderzocht die uit dit design-driven onderzoek naar voren komen. Uit collectieve creatieve acties zijn ontwerpen voortgekomen die zich hebben ontwikkeld tot tijdelijke ruimtelijke interventies, waaronder artefacten of niet-gerealiseerde speculatieve ontwerpvoorstellen, in verschillende institutionele en ruimtelijke contexten. In deze experimentele ontwerpbenadering vervult de auteur zowel de rol van ontwerper als die van onderzoeker die deel uitmaakt van de experimenten, wat een ideale uitgangspositie is voor het genereren van kennis. Kennis ontstaat hier iteratief door middel van cycli van ontwerp, experimenteren, observatie en kritische reflexiviteit. Reflexiviteit zet impliciete ontwerpbeslissingen om in expliciete inzichten en situatiespecifieke bevindingen in hun specifieke context in overdraagbare ontwerpbenaderingen.

Deze studie richt zich op ontwerpbenaderingen en betoogt dat publiekheid kan worden geactiveerd wanneer ontwerpers werken met *relationele, belichaamde* en *ingebedde* benaderingen die ruimtelijke transformatie afstemmen op maatschappelijke betrokkenheid. In dit perspectief komt collectieve creatie naar voren als een instrument om burgers te betrekken bij het vormen van publieke ruimtes rond hun gedeelde belangen, om deze gezamenlijk te problematiseren. Tijdens de pre-ontwerpfase is co-creatie de eerste stap naar ruimtelijke transformatie, waardoor een gevoel van collectief eigenaarschap ontstaat. Met behulp van collectieve problematisering vanuit co-creatie als input, vertalen ontwerpers ruimtelijke aspiraties naar ontwerpprocessen.

De bevindingen van het onderzoek zijn gebaseerd op een samenhangend aantal ontwerpgerichte ruimtelijke experimenten die tijdens het doctoraatstraject zijn ontwikkeld: Makerlab, Limen, De Hillevliet, Agora, Valencia 360 en Cotes Baixes. Met verschillende locaties, contexten, schalen, mate van implementatie en institutionele context variëren de experimenten van interieurontwerpinterventies tot architectonische ontwerpprojecten op stedelijke schaal. Deze diversiteit biedt de mogelijkheid tot een productieve kruisvergelijking om terugkerende patronen te identificeren die niet aan het licht zouden komen door één enkel experiment of één type experiment. Gezamenlijk onderzoeken de experimenten hoe publiekheid door ontwerp wordt geactiveerd onder verschillende ruimtelijke, sociale en institutionele omstandigheden.

Uit de experimenten kwam een aantal hoofdbevindingen naar voren. Ten eerste bleek het publieke karakter van bestaande openbare interieurs niet een vast ruimtelijk kenmerk te zijn, maar een dynamische drempelvoorwaarde die parallel loopt met liminaliteit als ruimtelijke overgang, die kan worden gevormd door ruimtelijke ontwerpfactoren. Vervolgens bleek uit de experimenten dat collectieve creatie fungeert als een mechanisme voor het vormen van publieke ruimtes rond

gedeelde belangen, waardoor het publieke karakter kan worden gearticuleerd voordat het ruimtelijk wordt vormgegeven. In de praktijk fungeert ontwerpgestuurd ruimtelijk experimenteren als een onderzoeksmethode waarmee theoretische hypothesen over publiekheid in praktijksituaties kunnen worden getoetst. Deze bevindingen wijzen in de richting van ontwerpbenaderingen die co-creatie, ruimtelijk experimenteren en relationele perspectieven integreren. Ten slotte werd duidelijk dat wanneer ontwerpers volgens dergelijke relationele, belichaamde en ingebedde ontwerpgestuurde benaderingen te werk gaan, zij ontwerper-onderzoeker worden: zij transformeren de ruimte en de ruimte transformeert hen.

De experimenten bevestigen de epistemische waarde van designgestuurde ruimtelijke experimenten als onderzoeksmethode en tonen aan dat kennis over publiekheid kan voortkomen uit het ontwerp zelf, of dat nu in de vorm is van ruimtelijke interventies, artefacten of speculatieve ontwerpen. Iteratie en tijdelijkheid, die in de architectuurpraktijk vaak als beperkingen worden beschouwd, bleken in deze benadering juist sterke punten te zijn, omdat ze het mogelijk maakten om te testen en zich aan te passen aan onvoorziene omstandigheden. Door kritische reflexiviteit werd de situationele en impliciete kennis uit de experimenten omgezet in productieve inzichten.

Deze bevindingen dragen bij aan het discours over de publieke ruimte door de activering van de publieke ruimte te herkaderen als een kwestie van ontwerpbenaderingen. Conceptueel gezien verruimt dit proefschrift het begrip van 'publiekheid' als een dynamische toestand die wordt geconceptualiseerd als een drempel die de stadia van liminaliteit volgt. Methodologisch gezien laat het zien hoe ontwerpgestuurd ruimtelijke experimenten rigoureuze, gesitueerde kennis over het openbare leven in de ruimte kunnen genereren. Voor de ontwerppraktijk biedt het onderzoek ontwerpbenaderingen die kunnen worden overgedragen naar andere contexten door deze werkwijzen aan te passen aan nieuwe contexten, waardoor architecten publiekheid kunnen ontwerpen in bestaande publieke interieurs.

# 1 Introduction

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## 1.1 Public Space in Late Modernity: Challenging Disciplinary and Epistemic Dichotomies

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In the contemporary context of growing urbanisation, design research and practice have turned their attention to public spaces as the cornerstones of urban life. By 2050, the UN expects 68% of the world's population to live in cities.<sup>1</sup> With larger human populations moving to cities, the way we live together in public spaces is becoming increasingly important. That is why professions dealing with the design of public spaces, such as urban design and architecture, are actively seeking ways through research and practice to better understand and design public spaces.

In late modernity, or what Bauman considers liquid modernity, reference points are ever-changing and nothing seems fixed, making public space challenging to conceptualise.<sup>2</sup> Consequently, the public sphere behaves like a liquid, moving through public and private spaces, and any interior or exterior private space can become a part of it. Understanding public spaces like a fluid transforms the way we conceive and design them, because it challenges existing dichotomies of private–public and interior–exterior. Dynamic public space demands design methods that respond to change, including its complex, dynamic, and relational nature.

This recognition of the inherent dynamism and complexity of public spaces has caused a turn towards public space practices centring on citizen agency to better respond to social needs.<sup>3</sup> Instead of being limiting, dynamism and complexity open a productive and generative space for public space design to play a more active role in its production and transformation.<sup>4</sup> More concretely, such a growing interest in citizen agency is evident in the increasing popularity of participation, citizen engagement, and placemaking among policymakers and designers who approach public space as a collective process rather than a finished product.<sup>5</sup> These collective procedural practices take public space as the

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<sup>1</sup> *World Urbanization Prospects*, xix.

<sup>2</sup> Bauman, *Liquid Modernity*.

<sup>3</sup> Awan et al., *Spatial Agency*; Carmona, 'Contemporary Public Space, Part Two'; Hou, *Insurgent Public Space: Guerrilla Urbanism and the Remaking of Contemporary Cities*.

<sup>4</sup> Lefebvre, *The Production of Space*.

<sup>5</sup> Krivý and Kaminer, *Introduction: The Participatory Turn in Urbanism*.

ground for collective action and reframe the role of design and designers in public space design, underscoring the need for new definitions and approaches that account for the fluid, negotiated, and even conflictive nature of public space.

Despite this shift, common public space design approaches often fall short because they continue to focus on public space as a solid, fixed, built product, neglecting its fluidity. The practical turn towards introducing citizen agency in public space design offers promising new tools that are not yet broadly embedded in practice or incorporated into theory. This reveals a disconnect between theory and practice. There is significant potential in exploring more productive exchanges between public space research and practice, for example, by testing theoretical hypotheses in real life, or building theories from design approaches. This fundamental disconnect between public space design research and practice is further aggravated by, and perhaps even rooted in, the epistemic compartmentalisation of public space.

One reason for the epistemic compartmentalisation of public space is due to a climate-based division between interior and exterior spaces. While public exterior spaces fall within the domain of urban design, public interiors fall within architectural design. Nevertheless, citizens' experience of public space, or public experience, does not necessarily correspond with the climate-based split defined by a building's envelope.

Therefore, the climatic and disciplinary divide between architecture and urban design fails to capture the continuous nature of citizens' public space experience, suggesting the need for a unifying concept. Here, 'publicness' emerges as a productive spatial quality that captures that continuity and better represents the fluid character of public spaces.<sup>6</sup> Publicness is a condition of a space that allows or supports people to meet and interact in a shared realm "through inhabitation, affective atmospheres, and materialities".<sup>7</sup>

Another reason for the epistemic division of public space is the filtering effect of the building envelope as a boundary. Publicness is a condition that bridges the interior-exterior divide and captures the dynamic essence of urban life. However, how to operationalise publicness as a spatial design quality remains unexamined. It is unclear how publicness moves from exterior to interior public space, and especially, what design can do to affect these connections. Currently, design approaches for activating existing public spaces do not explicitly consider how design decisions affect publicness.

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<sup>6</sup> Qian, 'Geographies of Public Space'.

<sup>7</sup> Qian, 'Geographies of Public Space', 78.

Publicness is a condition that emerges through specific relationships and actions between people, places and objects. Incorporating it as a variable to activate public spaces requires the expansion of existing design approaches, as common design approaches lack tools and techniques to integrate situated, relational, embodied, and embedded aspects. Considering these scientific and societal challenges, this thesis adopts a critical design practice standpoint to overcome epistemic dichotomies. The premise is that design approaches that integrate publicness could better serve the fluidity of public spaces and, therefore, adapt to their changing nature and diversity.

## 1.2 Problematising Publicness

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In a similar way to how participation and placemaking show a trend towards getting closer to citizens, public institutions are also aware that, in the changing context of late modernity, they need to engage with citizens and communities, making space for diversity, inclusion and urban life. In particular, cultural institutions, which are the ground for the creation and negotiation of shared values such as beauty or democracy, have evolved towards models that include citizens.

For example, libraries have been redefined as “social infrastructure” providing space for social participation and encounter.<sup>8</sup> For their part, schools have embraced community and shared experiences as the core of their public function.<sup>9</sup> Museums also often have a department of public programmes, acknowledging the role of “the public” and engaging with it as a cornerstone of their activities. Concretely, in 2022 the International Council of Museums adopted a revised definition describing museums as inclusive, diverse, and community-engaged institutions.<sup>10</sup> Such shifts towards communities in public institutions show a clear turn towards communities as the source of public life. Despite their interest in contributing to public life, public institutions often struggle to connect and engage with communities and include them in their spaces and programming.

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<sup>8</sup> Klinenberg, *Palaces for the People*; Audunson et al., ‘Physical Places and Virtual Spaces: Libraries, Archives and Museums in a Digital Age’.

<sup>9</sup> Cleveland et al., *Schools as Community Hubs*.

<sup>10</sup> International Council of Museums (ICOM), ‘Museum Definition’.

This highlights a fundamental problem of publicness, where a theoretically public space may not be perceived as such by citizens. To understand why and how this happens requires examining the spatial dimensions of publicness, which emanate from how citizens live and use space and revolve around accessibility, management and inclusiveness.<sup>11</sup> Furthermore, publicness, or how citizens use and experience space, is defined by both immaterial and material factors, with the latter being the main task of spatial design. Despite the critical role of design in publicness, the understanding of how publicness can be designed remains under-explored, because public space theory and practice are weakly connected. Thus, designers rarely know in advance how their design decisions will affect publicness. Therefore, a critical gap exists in exploring how design decisions based on material and immaterial factors alter publicness and activate existing public spaces, both interior and exterior.

The concept of spatial publicness shows the existence of a persistent epistemic and disciplinary divide separating interior and exterior public spaces. If publicness is understood as a continuum comprising both exterior and interior public spaces, the building envelope defines a critical threshold, a transitional space shaping the public experience. Therefore, instead of defining public spaces as either interior or exterior, there is a need to conceptualise and design the transitional space connecting the two. The threshold goes beyond the boundary between public and private spaces in favour of a spatial, social, and political construct.<sup>12</sup> Designing this threshold requires novel design approaches that can test whether the hypothesis of publicness as a socio-spatial threshold is accurate.

Testing theoretical hypotheses in public spaces is challenging because of the time, scale, and cost related to built environment interventions. Architectural and urban interventions usually unfold over long time-frames needing significant resources and slow institutional approval constraining their usefulness as instruments for research and experimentation. Moreover, once built, infrastructures can last for decades. Their obduracy limits the possibility of adaptation, iteration, or reversal, which are essential for testing hypotheses through design.<sup>13</sup> In this context, spatial experiments through temporary interventions and artefacts appear to be suitable tools for designers to test these hypotheses *in situ* enabling observation, reflection, and adjustment within a timeframe compatible with research and practice.<sup>14</sup> Experiments are common

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<sup>11</sup> Li et al., 'Defining the Ideal Public Space'.

<sup>12</sup> de Solá-Morales, 'Espacios públicos y espacios colectivos'; Meyer et al., 'Het ontwerp van de openbare ruimte'; Teerds, *De ruimte die we delen*.

<sup>13</sup> Brand, *How Buildings Learn*; Hommels, *Unbuilding Cities: Obduracy in Urban Sociotechnical Change*.

<sup>14</sup> St Hill, *This Is Temporary*; Lydon and Garcia, *Tactical Urbanism: Short-Term Action for Long-Term Change*; Oswalt et al., *Urban Catalyst*.

in disciplines ranging from medicine to the arts, but are underused in architecture and urban design. Design-driven research methodologies present a framework for spatial experiments connecting public space theory to practice with the objective of shedding light on the mechanisms of publicness in (between) public spaces.

The power of publicness as an operative variable for activating existing public spaces is significant in this regard. Nonetheless, we still lack knowledge about how design can affect the dimensions of publicness and the factors and approaches that can be used to do so. Surpassing counterproductive climatic divisions between exterior and interior public spaces makes room for a productive engagement of thresholds for publicness. In addition, design experiments and design-driven methods can connect research and practice by testing theories through targeted spatial experiments. This study explores theoretical understandings of public space— such as interior public space, publicness, and thresholds— through practice and connects them to the current challenges of existing public spaces to engage citizens and communities in their design processes.

## 1.3 Conceptual and Theoretical Grounding

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The current study is grounded in a range of theoretical perspectives that understand publicness as dynamic, relational, and situated. Instead of treating public space as a stable category or normative ideal, the framework developed here assumes that publicness takes shape through ongoing material–discursive relations between bodies, artefacts, spatial arrangements, and institutional practices. In the conceptual fieldmapping at hand, relevant voices and arguments were selected to support the design experiments, creating a particular conceptual assemblage around the research connecting public space, publicness, liminality, and design research.

Far from attaining a complete literature review on either topic, this conceptual assemblage presents a selective and partial view driven by design. The included authors and concepts are not an endorsement of a single theoretical tradition. Earlier sociological, political, and architectural theorists are brought together because they articulate aspects of late modernity, publicness, and space that become critical for scaffolding publicness in late modernity as a dynamic, relational, and situated spatial condition. Posthuman feminism addresses what earlier theories leave unresolved: publicness is not an abstract or universal concept; it is produced through situated, embodied and material relations. Design-driven research appears to be a way to conceptualise publicness by engaging with material and situated reality.

Positionality, once again, is key to understanding the literature assemblage. The literature resources and their selection respond to the author's embeddedness in the Delft Architecture school of thought, merged with a background in Spanish architecture and urban design culture. Literature from architecture, urban design, political theory, feminist studies, and design research merged to create a transdisciplinary body of knowledge to support the design experiments. Instead of preceding the experiments, the literature was explored, selected, and operationalised in parallel with the experiments as a generative tool to feed them. In the process, engagement with sources also transgressed common tools: concepts turned into schemes, drawings, artefacts or interventions. Literature became embodied in design experiments.

Organised in four parts, the conceptual mapping begins by illustrating contemporary socio-spatial conditions of late modernity from liquid modernity to posthumanism, then moving to presenting debates on publicness and interiority, eventually introducing thresholds and liminality as spatial interiority mechanisms, and concluding with design as a mode of enquiry to explore publicness through situated practice. What emerges from the conceptual selection is a grounding of publicness as a dynamic condition shaped by interiority and emerging at the threshold between exterior and interior, private and public space. Within this framing, design-driven research proposes a mode of enquiry capable of testing publicness *in situ* by integrating knowledges and practices.

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### 1.3.1 Contemporary Conditions of Public Space

In the contemporary context of late modernity, which is defined by continuous and accelerating change, publicness appears less as a stable attribute of space and more as a contingent spatial quality sustained through social practices. In a situation where reference points continually shift, termed “liquid modernity” by Zygmunt Bauman, institutions, identities, and practices become fluid and unable to “hold their shape long enough to frame human actions”.<sup>15</sup> This liquefaction has profoundly changed social life and, therefore, public space.<sup>16</sup>

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<sup>15</sup> Bauman, *Liquid Modernity*.

<sup>16</sup> Sennett, *The Fall of Public Man*.

At the same time, social practices are also shaped by mechanism of individualisation, and self-reflexivity, forcing individuals to constantly re-evaluate their lives and identities within the rapidly changing global systems.<sup>17</sup> Another relevant factor affecting public life in late modernity is technology, whose emergence hybridised the physical and digital realms, producing new spatialities in which publics assemble simultaneously in the streets and on online platforms, weakening the stable and solid condition of publicness.<sup>18</sup> Some have defined it as “thin publicness”, representing the decay of public life in modern cities because of a lack of diversity, civic engagement, and interaction.

While these perspectives portray the changing conditions of public spaces, they remain largely descriptive, offering limited insight into how people actually experience public life in space. Peter Sloterdijk describes the changing conditions of public life in late modernity through his theory of sphereology.<sup>19</sup> He classified spheres into microspheres (bubbles), microspheres (globes), and plural sphereology (foams) (Fig. 1.1). There seems to be a correspondence between these three spherical scales and the different scales of public life: the individual, the building, and the city. Establishing a parallel between Sloterdijk’s sphereology model and public life acknowledges the individual agency to alter their private condition through a process of self-augmentation. In turn, self-augmentation of the private bubble can lead to dyadic tension between two bubbles or even pluripolar tension among many bubbles, acknowledging the conflictive nature of public life. In this way, design is a process of spheropoiesis, and buildings are macrospheres “materially, affectively, and symbolically” translating the conditions of microspheres into the material world.<sup>20</sup> Design can alter the relation between bubbles, globs and foams and consequently shape public life.

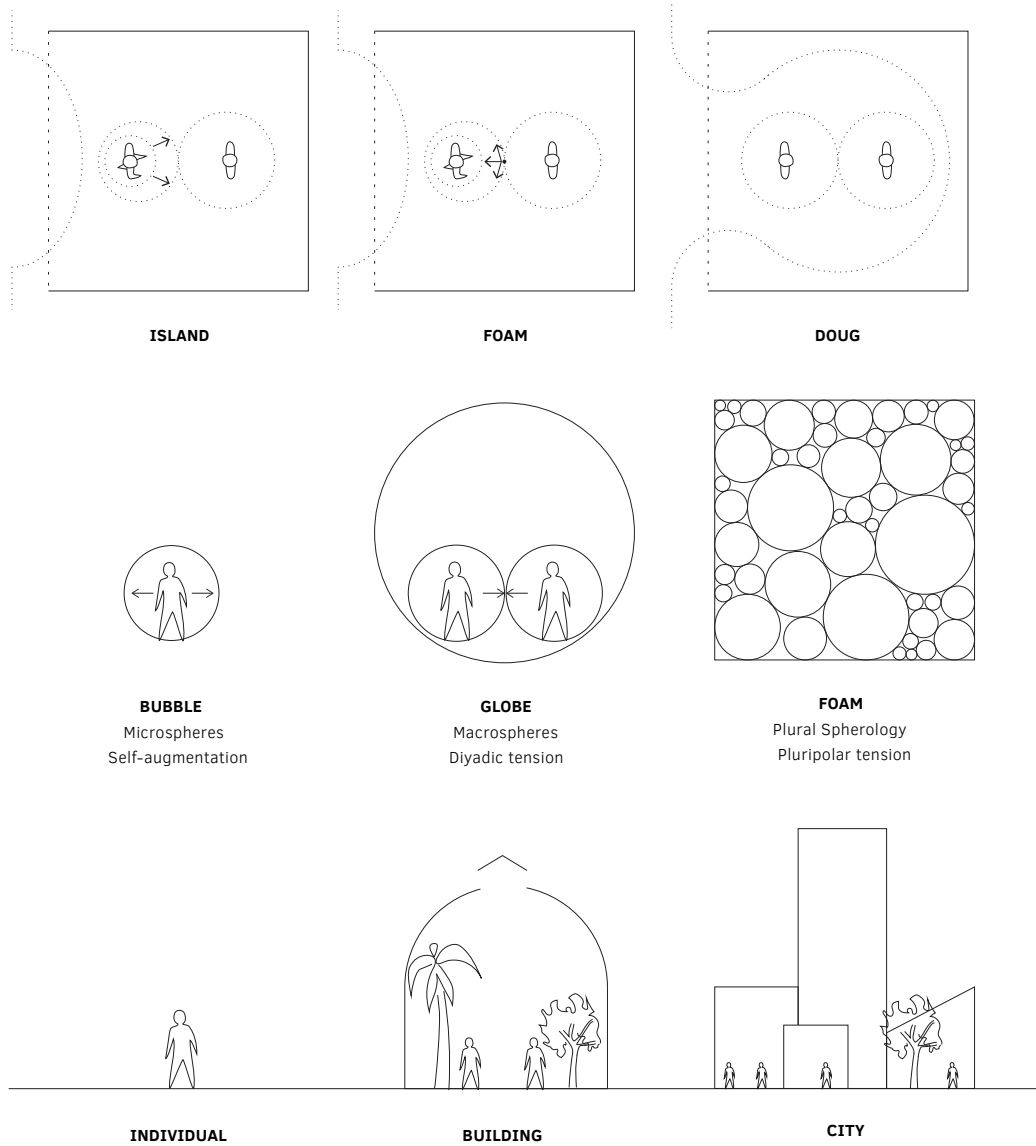
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<sup>17</sup> Giddens, *The Consequences of Modernity*.

<sup>18</sup> Castells and Castells, *The Rise of the Network Society*.

<sup>19</sup> Sloterdijk and Hoban, *Bubbles: Spheres Volume I: Microsphereology*; Sloterdijk and Hoban, *Globes: Spheres Volume II: Macrosphereology*; Sloterdijk and Hoban, *Foams: Spheres Volume III: Plural Sphereology*.

<sup>20</sup> Lemmens, ‘Spheres’.



**FIG. 1.1** Conceptual reinterpretations of Sloterdijk's theory of spheres connecting them into physical scales of the built environment. Bubbles around citizens are islands that when joined by other bubbles create globes, which can take the form of buildings or cities.

While sphereology offers a possible spatial ontology for late modernity around enclosures in shared environments, it risks treating spaces as self-contained, neglecting their connection and interdependency. Adding Bruno Latour's idea of networks complements spheres to keep them open, connected, traceable, and materially grounded.<sup>21</sup> Combining Sloterdijk's spatial-philosophical envelopes with Latour's relational and materialist account of connections through networks portrays public space as situated and permeable: a continuously produced milieu emerging through ongoing infrastructural, social and ecological entanglements.

Taken together, these perspectives reposition public space as an ecologically entangled, dynamically produced, and materially mediated relational milieu. For Gilles Deleuze and Félix Guattari, spatial and social life is not composed of fixed entities but of processes and relations that co-emerge.<sup>22</sup> As they put it, milieus are dynamic fields of relations that shape the capacities and behaviours of the bodies within them, from which temporary configurations of heterogeneous elements and assemblages emerge. Even momentarily, when these configurations stabilise, they produce territories or spatial identities that are held together through repetition and habit. Becomings describe the transformations that traverse milieus, alter assemblages, and deterritorialise existing orders through continuous transformations in capacity, relation, and affect, generating new possibilities for spatial and social formation by producing differences through relations.

Together, these notions describe public space as a relational ecology in which spatial conditions are continuously produced through dynamic interdependencies and ongoing processes of differentiation. Guattari later expanded the concept of ecology, supporting that life unfolds across three interdependent ecologies—environmental, social, and mental— whose entanglements shape spatial formation.<sup>23</sup> Public space emerges, then, at the intersection of these three ecologies, where environmental agencies, social practices, and modes of subjectivation are continuously composed and recomposed.

Building on the idea of relational ecology, feminist posthumanist theorists have further expanded on how subjective socio-spatial conditions emerge through entangled practices. Karen Barad's agential realism reframes relations not as interactions between pre-existing entities but as *intra-actions* through which bodies, materials, and boundaries are continuously constituted in an ongoing material-

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<sup>21</sup> Latour, 'Spheres and Networks: Two Ways to Reinterpret Globalization'.

<sup>22</sup> Deleuze and Guattari, *A Thousand Plateaus*.

<sup>23</sup> Guattari, *The Three Ecologies*; Koch, 'On Architectural Space and Modes of Subjectivity'.

discursive process rather than a fixed condition.<sup>24</sup> Donna Haraway complements this shift by introducing an ethical dimension and highlighting the situated, embodied, and multispecies character of these entanglements, foregrounding practices of cohabitation and response-ability that recognise how spaces are lived, negotiated, and co-inhabited by heterogeneous, more-than-human publics.<sup>25</sup> Rosi Braidotti extends these perspectives through affirmative posthumanism, where subjects and spaces are embedded in relational assemblages defined by their capacities for becoming rather than by stable identities.<sup>26</sup> From her vitalist perspective on becoming as a productive engagement with existing conditions, design plays a generative and transformative role. Together, these perspectives deepen public space as relational, in which configurations are continually enacted through material entanglements, situated response-abilities, and dynamic processes of becoming.

Relational, ecological, and posthumanist perspectives mark a shift from understanding public space as a stable, predefined realm to seeing it as co-emergent and continually shaped by entangled practices, affects, and becomings. Taken together, these spatial, social, and experiential dimensions call for a conceptual re-framing of public space itself, not as a predefined container, but as an emergent condition dependent on publicness, which is produced through the interrelation of spatial configurations, social relations, and subjective experiences. In its emergence, publicness is not a fixed category but a dynamic and relational becoming through entangled assemblages that co-constitute spatial conditions.

Having ontologically analysed public space as a relational and dynamic ecology defined by its publicness, it becomes necessary to explicate what *publicness* itself means. Publicness is not an abstract concept but a material reality with social and political implications.

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<sup>24</sup> Barad, *Meeting the Universe Halfway*.

<sup>25</sup> Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'; Haraway, *Staying with the Trouble*.

<sup>26</sup> Braidotti, *The Posthuman*.

### 1.3.2 Publicness: Meanings, Dimensions, Debates

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Having situated publicness in late modernity, it becomes relevant to explicate the meaning and dimensions of publicness. Publicness has been tackled tangentially as public space, public realm, or public sphere, yet it remains contested. Revisiting foundational debates clarifies how publicness has been defined, showing their shortcomings and preparing a move to redefine publicness as dynamic, relational, and situated.

Foundational political theories provide a background for understanding how modern thought frames public life. Jürgen Habermas holds a modern position where the public sphere is an ideal virtual space in which private citizens gather to discuss matters of concern and form public opinion through rational discourse.<sup>27</sup> Such normative ideals reinforce the divisions between public and private, reason and embodiment, and inclusion and exclusion. Hannah Arendt shifts attention towards performance through action and appearance with and among others as being the origin of publicness.<sup>28</sup> In her view, public life is formed by being seen, heard, and recognised in a shared space. Despite their deep influence on modern theory, both definitions neglect the structural inequalities and exclusions that marginalised groups face as a result of power relations: who appears, who speaks, and who participates. Feminist critiques respond by describing publicness as contested and uneven, shaped by exclusion and the formation of multiple counter-publics.<sup>29</sup> Thus, the public sphere is structured by power relations and an ongoing struggle among diverse publics. These theories foreground discourse, action, and contestation as defining publicness, although they overlook the mechanisms that make it operational.

Contemporary public space research shifts the focus away from the normative ideal of the public towards how publicness is materially, socially, and institutionally produced. Publicness is not an abstract concept but a spatial quality enacted through the dimensions of accessibility, management, and inclusiveness.<sup>30</sup> Such frameworks contemplate publicness as a multidimensional, relational, and context-dependent condition, offering tools for evaluating how spaces become, or fail to become, public.<sup>31</sup> One dimension affecting publicness that is often neglected in modern theories is spatial management. Owing to changing ownership and reference

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<sup>27</sup> Habermas, *The Structural Transformation of the Public Sphere: An Inquiry Into a Category of Bourgeois Society*.

<sup>28</sup> Arendt, *The Human Condition*.

<sup>29</sup> Fraser, 'Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy'.

<sup>30</sup> Li et al., 'Defining the Ideal Public Space'.

<sup>31</sup> Németh and Schmidt, 'The Privatization of Public Space'; Varna and Tiesdell, 'Assessing the Publicness of Public Space'.

points in late modernity, public space governance deeply defines the degree of publicness.<sup>32</sup> It is no longer clear what is private or public and, therefore, how to control and behave in public spaces. The degree of publicness is not an inherent spatial property but an outcome of continuously negotiated management, leading to an endless array of public space types and definitions. Acknowledging the continuous transformation of publicness as multidimensional and fluid unlocks a dynamic, processual understanding of space.

Building on operational models of publicness, contemporary scholarship defines publicness as an emergent, relational, and collectively produced condition rather than a stable quality. These perspectives expand the scope from identifying the dimensions of publicness to examining how publicness is created through variegated, contingent, relational, and historically situated, and shared socio-spatial practices.<sup>33</sup> It is through the collective practices of commoning that publicness materialises demonstrating the inherently collective, negotiated, and processual character of public life.<sup>34</sup> Publicness does not exist by theoretical designation; it is realised through situated acts of co-producing space. Publicness as a co-emergent phenomenon demands new design approaches to public space that prioritise openness, adaptability, and indeterminacy, as Richard Sennett and Pablo Sendra propose.<sup>35</sup> Reconceptualising publicness as a process through spatial arrangements challenges inherited boundaries between what is public or private, interior or exterior, and opens the way for examining how publicness materialises in interior settings.

Therefore, publicness is a condition independent of enclosures or climatic interior-exterior divides. Therefore, interior public spaces are also subject to the degrees of publicness and their dynamics. In the 1930s, Walter Benjamin, in his analysis of the arcades as the epicentre of public life, noted how interior public spaces extended public life and framed interiority as a bourgeois construction of subjective enclosure.<sup>36</sup> Since then, the authors have sharpened the conceptualisation of interiority, not as the opposite of publicness, but rather as a consequence of it, that is, the capacity of individuals to generate, sustain, or transform an inner life through their perceptive engagement with shared environments, positioning interior public space as a site where publicness and subjectivity are produced jointly.<sup>37</sup>

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<sup>32</sup> Carmona, 'Contemporary Public Space, Part Two', 171.

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<sup>34</sup> Sohn et al., 'Introduction'.

<sup>35</sup> Sennett and Sendra, *Designing Disorder: Experiments and Disruptions in the City*.

<sup>36</sup> Benjamin, *The Arcades Project*.

<sup>37</sup> Teston, 'On the Nature of Public Interiority'.

Against this backdrop, the public relationship between individuals and environments aligns with Peter Sloterdijk's notion that all human environments are forms of interiority articulated through bubbles, globes or foam.<sup>38</sup> Interiority is depicted as a spatial, atmospheric, and shared condition co-created by individuals in co-isolation. Foams introduce two main ideas: public interiors can be understood as indoor ecologies that follow dynamics similar to those of their exterior counterparts, and design becomes a medium for shaping these environments through their co-isolation or boundaries.<sup>39</sup> Richard Sennett tackles interiority as subject formation instead of an environmental condition.<sup>40</sup> For Sennett, co-isolation and solitude unleash the generative power of subjectivity in relation to the exterior world of difference, diversity, and complexity. Interiority is a dynamic, experiential condition that enables, structures, and intensifies the experience of subjectivity. A more pragmatic view by Mark Pimlott maintains that apart from being a private space around the individual, interiority also functions as an ideological domain where individuals experience a perceived sense of freedom.<sup>41</sup> These angles frame interiority as one of the conditions of publicness, asserting that design is responsible for mediating the relationship between the self and shared environment through the embodiment of publicness in public space.

From this understanding of interiority as a condition of publicness, design emerges as a mediator across urban, architectural and interior scales. From the perspective of urban design, Maurice Hartevelde operationalised the mechanisms of interiority across architecture and urban design that articulate publicness in the urban maze of interconnected public places, a concept somewhat analogous to Sloterdijk's concept of foams or Latour's concept of networks.<sup>42</sup> The systematic reconstruction of public interiors in Hartevelde's work reveals the typologies and socio-spatial transformations that enable public interiority and underscores the importance of bridging architecture and urban design. From the side of interior architectural design, Suzie Attiwill complements the typological description of publicness in public interiors as a predefined spatial category by exploring its ongoing, relational process through practices of inhabitation in the built environment, including interiorisation (hence also exteriorisation), objectification, subjectification, and spatialisation.<sup>43</sup>

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<sup>38</sup> Sloterdijk and Hoban, *Foams: Spheres Volume III: Plural Spherology*; Lee and Wakefield-Rann, 'Design Philosophy and Poetic Thinking: Peter Sloterdijk's Metaphorical Explorations of the Interior'.

<sup>39</sup> Lee and Wakefield-Rann, 'Design Philosophy and Poetic Thinking: Peter Sloterdijk's Metaphorical Explorations of the Interior', 160.

<sup>40</sup> Sennett, 'Interiors and Interiority'.

<sup>41</sup> Pimlott, 'Interiority and The Conditions of Interior'.

<sup>42</sup> Hartevelde, 'Interior Public Space; on the Mazes in the Network of an Urbanist'.

<sup>43</sup> Attiwill, 'Interiority in the Urban Environment'.

Re-framing interiority as continuously redefined pivots the target from what public interiors are to how interiority is formed within them, opening up a more dynamic, practice-based understanding of public interiority.

Accepting that publicness, whether in an interior or exterior public space, is subject to a process of interiority raises the question of where these interiority processes occur. Interiority already happens at the threshold, as a subjective transition between spatial realms guided by the ambivalence of connectedness and separation.<sup>44</sup> At the threshold of interiority, perspectives from both sides are required to define their relationship. Rather than defining public interiors through enclosure, the threshold is a site where interiority is produced and perceived in emergent and fluid public spaces. The shift from public interiors as spatial configurations to an understanding of interiority as a transitional condition proposes a framework in which thresholds generate publicness.

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### 1.3.3 Thresholds, Liminality, and Spatial Transitions

Publicness is not a stable attribute but a dynamic condition, a threshold that emerges, intensifies, and dissipates over time. Framing publicness as a threshold foregrounds process over product and transition over fixed state. In the built environment, where epistemic, spatial, and disciplinary divides tend towards dichotomy, presenting publicness as a threshold challenges standard design practice. Understanding publicness dynamics as spatial transitions is a stepping stone towards developing design approaches to activate them.

When discussing thresholds, liminality emerges as a productive condition for understanding spatial transitions. In 1909, Arnold van Gennep laid the foundations of liminality as a “rite of passage” in social transitions, characterised by three phases: separation, transition, and re-integration.<sup>45</sup> Later, in 1969, Victor Turner focused on the middle phase of transition as a status of “betwixt and between” where new social identities emerge.<sup>46</sup> In the liminal state, individuals enter a suspension of social roles and hierarchies, a space of possibility and becoming, leading to an intense sense of unstructured unity or *communitas*. Liminality is depicted as an experiential and relational condition parallel to the emergence of publicness as

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<sup>44</sup> Atmodiwirjo and Yatmo, ‘Interiority’.

<sup>45</sup> Van Gennep, *The Rites of Passage*.

<sup>46</sup> Turner, ‘Liminality and Communitas’.

a collective spatial experience. However, unlike spatial liminality, anthropological liminality in social rituals is often structured by clear temporalities and repetition. To apply liminality to public space and explicate the dynamic mechanisms of publicness, it must be spatialised.

In the mid-twentieth-century Dutch context, some authors presented a spatialisation of the threshold as an architectural concept blurring private-public inside-outside dichotomies. Architects such as Aldo van Eyck and Herman Hertzberger stood at a turning point between the high modernism of CIAM and critiquing its approach to public life through Team 10.<sup>47</sup> On his side, van Eyck operationalised the idea of in-betweenness as a space that is simultaneously inside and outside, private and collective.<sup>48</sup> This position was shaped together with Hannie van Rooijen (van Eyck), whose role in articulating human-centred, socially attentive architectural thinking has often remained unrecognised. Then, colleague Herman Hertzberger provided a practical framework of architectural elements for transitional “intermediate space” – halls, corridors, porches – owned by no one yet appropriated by all, thereby generating social interaction and public life.<sup>49</sup> Hertzberger paid especial attention to thresholds in learning spaces to facilitate appropriation, use, and adaptability, developing these ideas in collaboration with his partner and teacher Hansje van Seters (Hertzberger), whose contribution has similarly been marginalised in canonical histories.

More recently, authors have explored the role thresholds in the complexity of hyper-diverse and liquefying urban environments. For example, Quentin Stevens has paralleled thresholds to the spaces between architecture and urban design, where special behaviours take place, embodied by stairs, doorways or colonnades.<sup>50</sup> According to him, passage between social environments occurring at the threshold (interior-exterior, private-public) invites individuals to let go of social norms and “loosen up” in a protected environment, which he calls “loose space”. Depicting thresholds as spaces of encounter and negotiation opens the way to conceive them not only as architectural in-betweens but also as political realms or common spaces where shared meanings emerge.

Extending the argument to the city, thresholds are not particular architectural elements but belong to the urban scale. Publicness does not happen in clearly bounded public spaces, but in what René Boomkens calls a “drempelwereld”, a

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<sup>47</sup> Merino Del Río, ‘The Story of Another Idea’.

<sup>48</sup> Eyck et al., ‘Drempel En Ontmoeting, de Gestalte van Het Tussen’.

<sup>49</sup> Hertzberger, *Lessons for students in architecture*.

<sup>50</sup> Stevens, ‘Testing the Limits: Building Thresholds and Urban Liminality’; Franck and Stevens, *Loose Space: Possibility and Diversity in Urban Life*.

threshold world composed of passages, interfaces, waiting zones, entrances, and transitions.<sup>51</sup> Public experience is neither fully inside nor outside; it occurs in a dynamic change of positions, roles, and states. Accordingly, public interiors are thresholds and can be transformative at the urban scale by creating loose spaces for negotiating shared meanings. The “city of thresholds” is an urban fabric structured as a dynamic network of open, porous, and relational intermediary spaces where identities co-emerge.<sup>52</sup> Introducing urban porosity through the perforation of literal and symbolic segregation boundaries creates thresholds that foster common spaces, facilitating exchange, resistance, and, possibly, emancipation. Such a political reading of porosity resonates with urban design approaches that frame urban porosity, in addition to a theoretical metaphor, as a practical framework for design that embraces ambivalence and complexity as spatial agendas to create open and interconnected cities.<sup>53</sup> Porosity operates, then, as a complementary concept to liminality by explaining how threshold conditions are created and sustained in space. Yet, it remains unclear how to create and design threshold conditions through architecture and urban design.

Public interiors possess a generative force that fosters public life when designed as thresholds of publicness. Simultaneously, architectural practice often struggles to operationalise the spatial threshold condition, probably because it prioritises the built form over the human experience, revealing a tension between the solidity of architectural structures and the fluidity of the liminal space.<sup>54</sup> Within this tension, thresholds can be understood as a “thirdspace” and as an “in-between” condition. “Thirdspaces” challenge binary oppositions in favour of socially produced space, building on Henri Lefebvre’s theories.<sup>55</sup> “In-between” emphasises spatial situations of transition and indeterminacy, where identities are temporarily suspended, which can be designed by centring the user experience through more processual, experiential and performative spatial practices.<sup>56</sup> Beyond reducing public thresholds to the entrance or in-between circulation spaces, Cathy Smith considers entire public buildings as thresholds defining liminality as the participatory “interaction between space and people”. For example, museums are public interiors that have

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<sup>51</sup> Boomkens, *Een Drempelewereld*.

<sup>52</sup> Stavrides and De Angelis, *Common Space: The City as Commons*; Stavrides, ‘Common Space as Threshold Space: Urban Commoning in Struggles to Re-Appropriate Public Space’; Stavrides, *Towards the City of Thresholds*.

<sup>53</sup> Wolfrum, *Porous City*.

<sup>54</sup> Smith, ‘Looking for Liminality in Architectural Space’.

<sup>55</sup> Soja, *Thirdspace. Journey to Los Angeles and Other Real-and-Imagined Places*; Oldenburg, *The Great Good Place*; Bhabha, *The Location of Culture*.

<sup>56</sup> See Carmona, Lefebvre, Arendt/Habermas.

shifted towards more performative user experiences and can be conceived as liminal spaces.<sup>57</sup> Public interiors are not simply “inside public spaces”. They are active thresholds where publicness is generated.

Across this discussion, public interiors emerge as threshold environments where publicness manifests as a dynamic and contingent condition. Thresholds mediate the transition between private and public, interior and exterior, the self and the collective, and between stability and change. In doing so, they concentrate on the possibility of altering publicness. Public interiors are therefore defined less by their enclosure and more by their permeability and relational dynamism. Here, publicness is a performative potential realised at the threshold by hosting forms of collective life. Because they are processual, experiential, situated, and politically charged, thresholds cannot be tackled through design approaches focused on solid form, posing a basic difficulty in designing publicness through thresholds.

Common public space design practices lack the tools and approaches for intentionally incorporating liminality. Owing to the dynamic and political nature of public thresholds, grounded *in situ* and ongoing material-discursive processes, it is methodologically difficult to design them considering interdependent environmental, social, and mental ecologies.<sup>58</sup> Researching and developing these requires accounting for their dynamic, relational, and situated aspects, which are often invisible to conventional analytical tools. To investigate publicness as a threshold condition, research must move beyond traditional methods towards experimental approaches. In this doctoral research, rooted in architectural and urban design, as a matter of course, design has been the driving method of enquiry.

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#### 1.3.4 Investigating publicness in design

As previously established, publicness is relational, performative, temporal, and politically negotiated; therefore, it cannot be adequately studied using traditional static analytical methods. In conventional research methodologies, public space is studied a posteriori, using descriptive, representative, or evaluative methods, once built. These approaches fail to capture the emergence and temporality of publicness across time and space, its embodied and affective dimensions, its collectively negotiated and contested processes, and its ambiguity and fluidity as a threshold

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<sup>57</sup> Sfinteş, 'Rethinking Liminality: Built Form as Threshold-Space'.

<sup>58</sup> See Smith, Barad, Haraway, Guattari.

condition of publicness. Exploring publicness as a threshold condition that embraces its dynamics requires embedded, embodied, and relational approaches, including methods, tools, and techniques that operate within spatial transformation, rather than merely observing or reflecting on it. Design as a mode of enquiry appears to be the way forward to bridge the methodological gap to explore publicness in space.

During the second half of the 20<sup>th</sup> century, authors have proven the independence of design as a legitimate epistemic practice capable of generating knowledge. Bruce Archer claimed that design could address “ill-defined” problems through its own form of reasoning, problematisation, and iterative enquiry.<sup>59</sup> Nigel Cross added that design has its own “ways of knowing” through reasoning, synthesis, and interaction, establishing it as a third epistemic culture alongside the sciences and the humanities.<sup>60</sup> Christopher Frayling examined the different connections between design and research –into, for, and through– separating the latter as a research mode in which knowledge is generated through practice, creating a productive bridge between design research and practice.<sup>61</sup> In professional practice, knowledge emerges through “reflection-in-action”, or thinking by doing, in which problems and solutions co-evolve through action.<sup>62</sup> Altogether, they demonstrated that design can be a form of research, as it has its own distinct epistemology in which knowledge is produced through design practice itself. Design enables the formulation and testing of spatial hypotheses *in situ*, allowing knowledge to emerge through action, iteration, and reflection.

To become operative, architecture and urban design require their own disciplinary frameworks for research through design (RTD). According to Jane Rendell, design produces knowledge, not merely applies it, thereby legitimising architectural research’s epistemic position as a combination of interdependent modes of enquiry: design practice, theory and critique.<sup>63</sup> This raises the question of whether all architectural designs are research, making it crucial to clarify the epistemic, disciplinary, and methodological conditions of such design practices. Luck proposes a three-step differentiation: design research (rooted in product, interaction, or industrial design traditions), architectural research (including historical, theoretical, or technical investigations about architecture), and architectural design research,

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<sup>59</sup> Archer, ‘Whatever Became of Design Methodology?’; Archer, ‘The Nature of Research’.

<sup>60</sup> Cross, *Designerly Ways of Knowing*.

<sup>61</sup> Frayling, *Research in Art and Design*.

<sup>62</sup> Schön, *The Reflective Practitioner*.

<sup>63</sup> Rendell, ‘Architectural Research and Disciplinarity’.

where design is the primary means of enquiry.<sup>64</sup> The latter category introduces the domain of design-driven research, in which design is the driving force behind research endeavours. Beyond acknowledging its epistemic and disciplinary validity, recent shifts in the academic world have institutionally established design-driven research in architecture as a legitimate mode of enquiry. Contemporary research arenas such as ADAPT-r, CA2RE+, Practice Research Symposia at RMIT, and the EAAE's Charter on Architectural Research demonstrate clear global institutional recognition of the contributions of design-driven research to the field.<sup>65</sup>

When design research is accepted by architectural and urban design, its research rigour is often falsely perceived by academics as a pitfall. If design is simultaneously the method, process, and outcome by which practice generates knowledge through situated design decisions, the researcher is no longer external to the study object. Being embedded in the design, it becomes difficult for the researcher to claim neutrality or detachment from their actions and judgements. This is when reflexivity emerges as a tool to explicate the researcher's positionality and situatedness, thereby achieving rigour by accounting for subjectivity, rather than avoiding it. Situatedness and reflexivity are epistemic conditions of design and can become strengths when tacit knowledge is made explicit. Donna Haraway articulated the power of situatedness through subjective, embodied, and accountable knowledges from specific contexts. To become research, the situated knowledges extracted from design practice must become explicit through reflexivity.<sup>66</sup> Margitta Buchert advocates reflexivity as a systematic methodological approach that unlocks architectural knowledge through empathy, which is a designer's capacity to read and produce spatial situations. Through reflexivity, these situated and often implicit forms of knowledges are transformed into communicable research insights without abstracting them from their material and cultural contexts. However, gathering these situated knowledges can be elusive to standard design methods, tools, and techniques, prompting designers and researchers to adopt approaches such as collective creation and spatial experimentation.

Collective creation enables designers to access experiential, embodied, and relational knowledges embedded *in situated* ecologies. Although various forms of civic engagement, such as co-design, participation, and placemaking, have been studied, co-creation, as an act of common creativity, is particularly well-suited for gathering

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<sup>64</sup> Luck, 'Design Research, Architectural Research, Architectural Design Research'.

<sup>65</sup> ADAPT-r: <https://cordis.europa.eu/project/id/317325/fr>; CA2RE+: <https://ca2re.eu/ca2replus/>; Practice Research Symposium (PRS) at RMIT University: <https://practice-research.com/about>; EAAE's Charter on Architectural Research: <https://www.eaae.eu/academies/eaae-charter-on-architectural-research>.

<sup>66</sup> Buchert, 'Design Knowledges on the Move'.

situated knowledges. Co-creation is best for early exploratory design phases, where participants share their knowledges through making, storytelling, or activities.<sup>67</sup> Instead of seeking consensus, co-creation aims to develop processes for constructing collaborative meanings through the interpretation of situated experiences in which designers and researchers relinquish their expert roles.<sup>68</sup> In any case, collective creation is generative and transformative only if participants retain their agency. As early as 1969, Arnstein demonstrated that citizen participation without power redistribution leads to tokenism and manipulation of the citizenry. Therefore, co-creation modifies design hierarchies and positions the designer/researcher as an agent embedded in an ecology or network alongside other human and nonhuman agents who are co-producers of tacit, situated knowledges (Fig. 1.2). Contrary to other participative approaches, in co-creation, collective action produces a common problematisation and creates a “public” yet not an actual design. Co-creation results are discursive and non-spatial, requiring further articulation and experimentation in spatial terms.

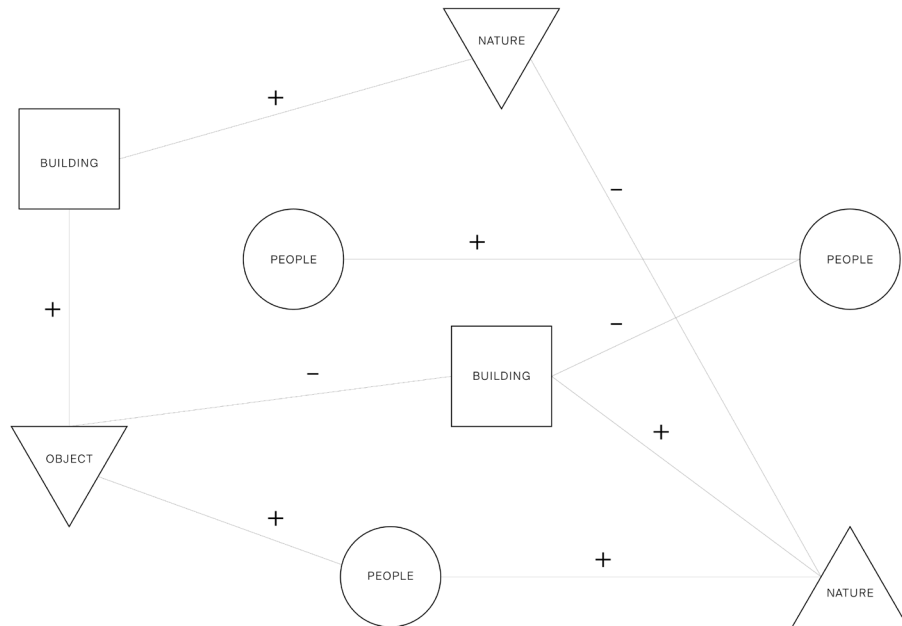


FIG. 1.2 Speculative drawing on urban ecologies: a network of affects connecting people, buildings and objects. Design can mediate and regulate those affects.

<sup>67</sup> Mattelmäki and Visser, 'Interpretation of Co-Design and Co-Creation'.

<sup>68</sup> Sanders and Stappers, 'Co-Creation and the New Landscapes of Design', 9.

Spatial experimentation enables the investigation of publicness through design action by articulating the situated knowledges gathered through co-creation into a design hypothesis. These experiments can take the form of artefacts, design interventions, or speculative designs. In urban contexts, where spatial conditions are dynamic, spatial experimentation serves as an anticipatory mode of enquiry, comprising design artefacts that probe possible spatial futures for exploration rather than validation.<sup>69</sup> However, this exploratory approach tends towards speculation without proposing or validating actual solutions. In this sense, speculative design – or unrealised experiments– appears as a critical practice for testing design ideas through fictional and hypothetical design artefacts.<sup>70</sup> Instead of proposing solutions, speculative design asks questions to stimulate reflection on “probable, plausible, possible and preferable futures” which can be a productive tool when the material realisation of the design is not feasible. Ideally, spatial experimentation takes the form of *in situ* design interventions that connect spatial, social, and mental ecologies. These situated experiments provide valuable insights into architectural and urban design methods and approaches for investigating spatial hypotheses in ambiguous and emergent contexts.<sup>71</sup> Design interventions often revolve around artefacts and concepts that produce knowledge through reflection and interpretation. Nevertheless, they frequently lack an explicit articulation of how the design, artefact, and its use are expected to confirm the hypotheses. Affordances are “possibilities for action that users can engage in when in an environment or using an artefact”, providing a blueprint for designing, speculating, or reflecting on the possible effects of design interventions.<sup>72</sup> Spatial experimentation is particularly suitable for cases that defy fixed categorisation, such as public interiors. The threshold condition of publicness demands experimental approaches that include artefacts, design interventions and speculation to probe situated spatial hypotheses.

A literature review of existing research has shown that publicness is relational, emergent, and processual, and that thresholds and liminality are spatial conditions crucial for understanding publicness dynamics. Additionally, publicness appears to be particularly critical in public interiors because of their boundaries with public space. Although publicness has been extensively examined in theory, its operationalisation through design remains under-explored, particularly in public interiors and at the interior-exterior boundary. Publicness has been studied a posteriori through definitions, categorisations, observations, or reflections, without probing it in space.

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<sup>69</sup> De Smet and Janssens, ‘Probing the Future by Anticipative Design Acts’.

<sup>70</sup> Dunne, *Speculative Everything*.

<sup>71</sup> Halse and Boffi, *Design Interventions as a Form of Inquiry*.

<sup>72</sup> Widmer and Rérat, ‘Operationalizing Affordances for Public Space’.

To probe publicness as a threshold condition, research methods must embrace its dynamism, relationality, and situatedness. This dissertation is articulated around a research aim, objectives, and questions to explore how design approaches can activate publicness in public interiors.

## 1.4 Framing the Enquiry: Aims, Questions and Research Objectives

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Building on the identified gap between theoretical understandings of publicness and its spatial operationalisation through design, this dissertation adopts an exploratory, design-driven mode of enquiry in which aims and research questions are progressively articulated through non-linear iterative engagement with the literature and real-world experiments.

Through this iterative process, the primary aim emerged: to develop and test design-driven approaches for activating publicness in existing public interiors through thresholds, collective creation and situated spatial experimentation. This will be achieved, first, by examining the conceptual foundations and spatial conditions of publicness. Then, by testing through design experiments some applicable approaches to publicness. Later, by reflecting on the findings and finally by assessing its transferability.

The following questions guide the dissertation's content, serving as a reference point for the experimental approaches and framing the findings and contributions in later chapters.

- **How can design approaches activate publicness in existing public interiors?**

- Conceptual Foundations**

- What is publicness in the context of public interiors, and how is it conceptualized through the notion of thresholds?

- Conditions and factors**

- What spatial, social, and institutional factors and conditions enable or constrain the activation of publicness in existing public interiors?

### **Testing Concepts and Methods through Design Experiments**

- How can design-driven research through spatial experimentation test hypotheses about publicness in public interiors?
- How can collective creation contribute to the activation of publicness and the emergence of an inclusive public life in public interiors?
- Which design approaches can effectively activate publicness across scales in existing public interiors?

### **Contribution and transferability**

- How can situated findings from design-driven spatial experiments be articulated as transferable design knowledge for activating publicness in public interiors?

These questions can be decomposed into research objectives, which, far from being positivist “a priori” goals, have arisen from actual research experiments and their findings. The objectives connect the questions to the findings by providing a rationale.

- To establish Design-Driven Research as a rigorous framework for producing knowledge about publicness as a spatial condition through situated spatial experimentation and critical reflexivity.
- To develop and critically examine tools and approaches that enable designers to engage with liminality and public thresholds, addressing their dynamic, experiential, and situated character.
- To examine how collective creation functions as a design-driven research tool that enables the activation of publicness through shared agency, situated knowledges, and collective problematisation embedded in environmental, social, and mental interdependent ecologies.
- To investigate how liminality and public thresholds can be operationalised through spatial interventions to activate publicness in public interiors.
- To test and identify spatial design strategies that activate publicness through co-creation and spatial experimentation in existing public interiors across multiple scales.
- To compare situated spatial experiments and articulate recurring design approaches, translating context-specific findings into transferable design approaches to activate publicness across different contexts.

Research objectives respond directly to the identified gap in public space design practice, namely, the lack of design approaches for designing liminality and public thresholds to activate spatial publicness. Given the dynamic, relational, and situated nature of publicness, embedded in interdependent environmental, social, mental, and political ecologies, objectives are formulated to be adapted along design-driven

experimentation. Together, they translate the conceptual challenges from literature and experiments into a strategy for probing, testing, and articulating publicness through a situated spatial practice.

## 1.5 Research Positioning: A Design-Driven Research Approach

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To explore how publicness can be strengthened in existing public spaces, this study used design-driven research (DDR) grounded in the author's design practice during the PhD trajectory. Experiments were selected to address the urgent questions arising from theoretical and evolving design-driven practical research. Embedded in specific socio-spatial contexts, the experiments tested theoretical hypotheses through *in situ* spatial interventions, often including artefacts, with an overarching non-linear, interdisciplinary, and practice-based DDR approach.

Design-driven research bridges the disciplinary and epistemological divide between public space theory and practice by merging concepts, models, tools, techniques, and approaches native to both into an integrated workflow that is expected to contribute to both bodies of knowledge.<sup>73</sup> During the research, knowledge was generated through designing, drawing, building models, collages, workshops, or behavioural observation. The iterative use of design tools and techniques and their consequent reflection was expected to highlight findings relevant to the theory and practice of public space design.

Although the experiments differed in their characteristics, they all shared the researcher/designer as a continuous factor and a non-linear iterative design cycle. In general, the process follows the steps of design, experimentation, and reflection. These steps can be expanded to include analysis, co-creation, design, experimentation, observation, reflection and iteration. The key to this research method is the experimentation phase, where hypotheses about publicness are tested through design considerations. In some cases, the experimental designs became actual spatial interventions, while in others, they remained speculative.

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<sup>73</sup> Frayling, *Research in Art and Design*; Cross, *Designerly Ways of Knowing*; Friedman, 'Theory Construction in Design Research'.

The designer/researcher was the common factor in all the experiments. Because the current approach assumes that design is a situated, relational, and creative practice in which the designer is embedded in a situated ecology, it was crucial to make the designer's positionality and agency within that ecology explicit to transform the experimental results into usable research findings. When tacit knowledge is uncovered, the situatedness and positioning of design-driven research become strengths.

Acknowledging the power of situatedness for research rigour and relevance, and the role of the designer/researcher as an agent within an existing ecology, collective creation offers a way to approach design processes for public spaces by catalysing the community's collective intelligence.<sup>74</sup> Collective creation is essential for accessing situated knowledge and enabling inclusive collective problematisation. In this research, collective creation became a way to understand the building and the community and to engage citizens in the process by identifying common "problems" through problematisation.

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### 1.5.1 Contributions to Theory, Methods and Practice

Through this methodological approach, this study aims to contribute to both public space research and design as a continuum, not discreet domains. First, the cross-comparison of the experiments identified strategies for activating publicness in existing public spaces. The analysis of the methods, tools, and techniques used in the experiments supports the articulation of a specific DDR approach for testing publicness in space, combining collective creation, situated knowledge, spatial experimentation, and critical reflexivity, which could be applied to other design practices. Finally, the refinement of the findings shows a possible way to conceive publicness in public space design that blurs the epistemic and disciplinary divisions between interior-exterior public space, public space theory and practice, and architecture-urban design-interior design.

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<sup>74</sup> Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'; Schön, *The Reflective Practitioner*; Sanders and Stappers, 'Co-Creation and the New Landscapes of Design'.

## 1.5.2 Scope and limitations

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In the vast fields of public space design and design-driven research, this dissertation holds particular conceptual, methodical and epistemic significance within temporal socio-spatial contexts. Typologically, the focus is on existing public spaces in public buildings. In particular, the border between interior and exterior public spaces serves as an interface for publicness. Therefore, this research does not explicate publicness in all public spaces within urban environments or how publicness can be activated in the interior of private spaces. Conceptually, the research is located in the context of late modernity, assuming public space liquefaction that allows for the activation of interior public space publicness by defining public thresholds. From all factors defining publicness, this study focuses on the spatial ones, not programming, governance, or operations. Socio-political definitions of the public sphere and publicness are beyond the scope of this study.

The research approach included a mix of mostly qualitative tools and techniques that were adapted for each experiment. Although used in the Limen experiment, quantitative tools are outside the scope and were only used as complementary to design tools and approaches without the expectation of being able to extract statistical generalisations. The experiments performed were embedded in different sociocultural contexts and therefore demanded adapted approaches; yet they collectively represent a body of work that is illustrative and generative, not an exhaustive representation of all public spaces and buildings. Temporally, the experiments were conducted between 2021 and 2025 in the context of late modernity and the (post-)COVID 19 pandemic, which clearly had an effect on the use of public space and the possible research experiments. All cases are located in Europe, most in the Netherlands, which is a very particular context for public space and publicness. In addition, institutional cultures conditioned the processes and products of the experiments. Given the difficulty in testing in the built environment, design experiments that evolved into small-scale spatial interventions were affected by operational and institutional constraints, which limited their outcomes. In addition, their small-scale and temporary nature hinders their ability to draw long-term conclusions about publicness.

Epistemically, the knowledge produced in this research is situated and mediated by the designer/researcher's positionality and partial perspective during the doing-reflecting-iterating cycles. Although critical reflexivity contributed to the transferability of the insights, the findings of this study are not expected to be universal.

The constraints and boundaries of this study are strengths of its relevance. The author operated as both a designer and researcher, developing designs influenced by preferences, values, and background, and presented in a situated, embodied, and relational way. The design/research process and results cannot be separated from the designer and researcher. They can be disentangled through reflection and by making the author's positionality explicit in the research process. However, reflexivity does not eliminate bias; it only reveals and mitigates it. Tools and techniques used, such as collective creation or workshops, are context-dependent and must be adapted for use in different contexts.

In conclusion, this research does not aim for universality in the sense of context-transcending knowledge, nor does it rely on the premise of a presumed or expected totality of knowledge. Instead, it seeks to provide transferable insights into design approaches by engaging with the “whole” without assuming completeness, generating forms of general understanding through situated experimental practice that can be adapted across contexts in line with the liquid modernity context. Contributing to design-research, theory-practice within a scope limited by its situatedness which, at the same time, endows the research with the uniqueness of being based on reality and not only theoretical inference.

## 1.6 Structure of the Dissertation

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As design-driven research, this dissertation is an artefact in itself, integrating disciplinary and epistemological conventions into a monograph following an established structure (similar to the IMRAD –Introduction, Methods, Results, and Discussion), both at the dissertation and experiment level. An experiment within an experiment. What might appear as a straitjacket becomes a framing device that clarifies design research that would otherwise be cryptic to the reader. The current volume is the result of a continuous dialogue between originality and conventionality and has been designed as part of the author's design practice. The dissertation is therefore conceived not only as a document reporting on research performed but also as a designed artefact that embodies its own approach.

Like the research process, the writing of the dissertation has been non-linear: the literature review developed in parallel with the design experiments, which also overlapped in terms of time. In design, form and content cannot be separated, and this

volume confirms this. The dissertation's content was developed by blending written and graphical tools as both a process and a result: drawings summarised the literature review, the thesis layout emerged as the writing progressed, and images and technical drawings were collected during the experiments. This iterative material production mirrors DDR's epistemic position, in which knowledge is generated through doing.

Instead of being performed a posteriori, the experiments developed parallel to the literature review, boosting and supporting it, as shown by the research timeline (Fig. 1.3). Chapters 4,5 and 6 gather the spatial experiments that form the empirical and generative core of the research, testing the theoretical hypotheses to explore how publicness emerges through situated interventions. These cases, rather than being chosen theoretically, emerged from the realities of design practice as part of the author/researcher's body of work. Some were sought after, others just appeared on the designer/researcher's path, and some did not make it into the research because they did not contribute to it. This is the reality of DDR and situated experimental practice: the positionality and limitations are research factors to consider and explain.

Makerspaces in public libraries during the Makerlab project (Chapter 4) test collective creation for design-driven research, study publicness in cultural institutions, and examine how public interiors can foster cultural values. Limen (Chapter 5) presents an actual experiment conducted to explore liminality, conceptualising the accessibility of interior public space as a threshold, and challenging the interior/exterior division to activate public interior publicness. A comparative reflection of diverse design experiments(Chapter 6) reveals transferable principles by demonstrating overlaps *in situated* design strategies towards a design framework for public space activation. All experiments followed a structure similar to that of the dissertation: context, methods, experiments, findings, and reflections, so that they could stand as independent pieces of research.

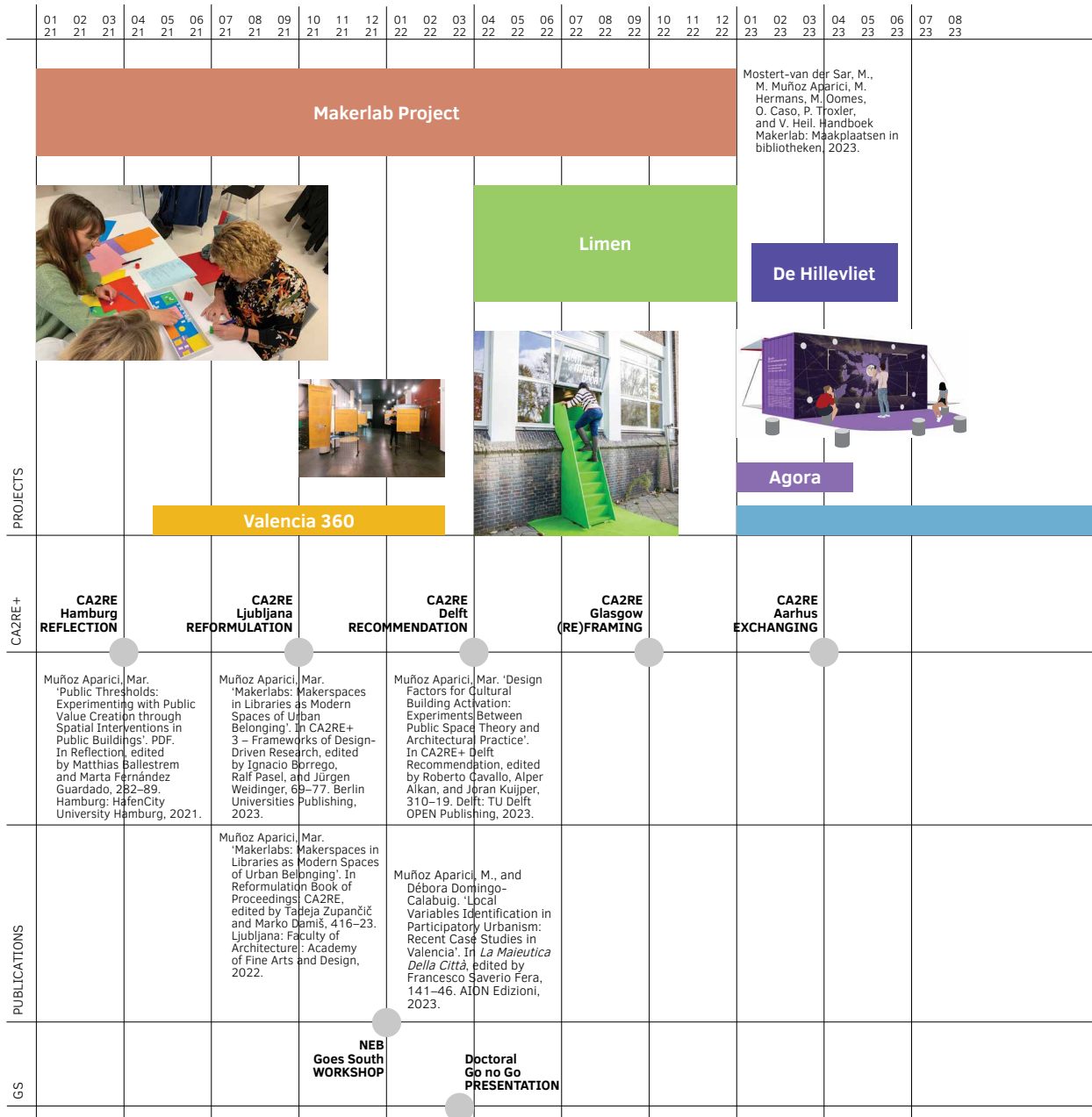
After completing and reflecting on the experiments which were refined through iterations and reflections during CA2RE events, modes of enquiry emerged (Chapter 2). This chapter establishes the foundations of Design-Driven Research (DDR) in relation to the key disciplinary and epistemic challenges faced by public space design. Introducing the personal DDR approach as a relational, situated, and embedded critical transdisciplinary practice based on a non-linear and iterative cross-comparative analysis of design experiments. Co-creation is a common thread in design research practice and is explored in detail in Chapter 3 in the embedded peer-reviewed research "Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design". Only then, knowing what had been done and how, did the actual problematisation arise:

The introduction (Chapter 1) lays the foundations for understanding the relevance and background that lead to the specific mode of enquiry and situated experiments. In this sense, this dissertation performs a retroactive structuring of a research journey that, in practice, unfolded through situated action and critical reflexivity. Across these chapters, the dissertation progressively responds to the overarching research question: how can design approaches activate publicness in existing interior public spaces?

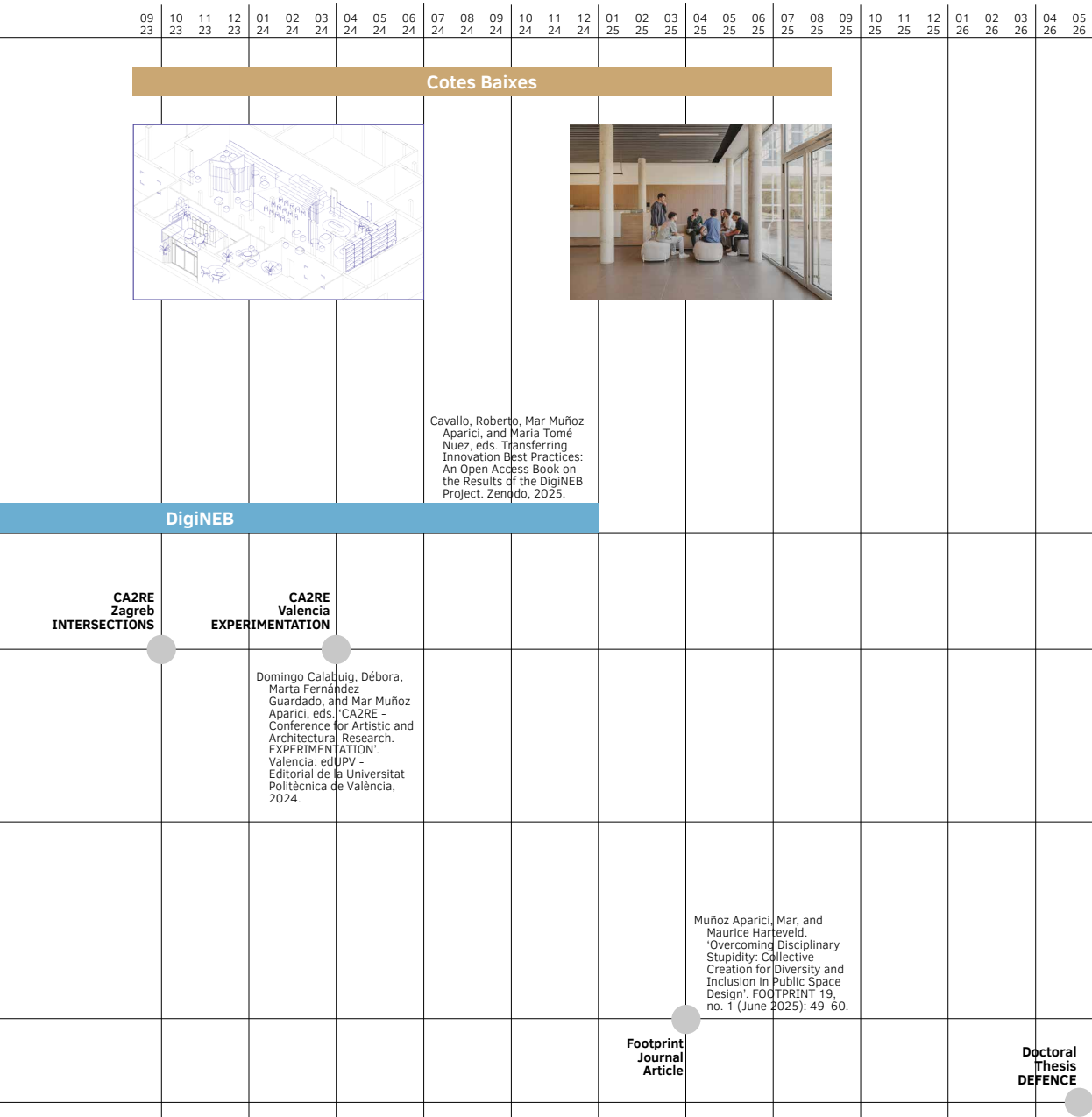
Once the problem was clarified, the reflection and cross-analysis of the situated findings from the experiments aimed to respond to the research question of how design approaches can help activate publicness in existing public spaces. Finally, the findings are elevated to a broader field to explicate the research's theoretical, methodological, and practical contributions (Chapter 7). These conclusions articulate the transferability and limitations of the situated findings while outlining future research directions in design-driven research and public space design.



# 1.7 Research Timeline



**FIG. 1.3** Timeline showing the interconnection of the different layers in the doctoral trajectory. Design projects and experiments, CA2RE+ Events, Publications and output, Graduate School Milestones, and personal highlights.



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## Glossary

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### Accessibility

Beyond physical access, in this context, it refers to the publicness conditions that enable or limit participation in public space and public life.

### Affordance

Possibility for action emanating from the relationship between the individual and their environment.<sup>75</sup>

### Artefact

Material object or technology created by human agency, which interacts with users and environments to alter action and experience, holding meanings beyond its physical form.

### Assemblage (public space)

A conception of public space as composed of dynamic relations between people, objects, environments, and meanings, rather than as a static entity.<sup>76</sup>

### Co-creation / Collective creation

Design approaches that centre collaboration with actors as part of a common problem definition, integrating collective knowledge.

### Communitas

A temporary state of equality and cohesion forming among people sharing a common experience in liminal spaces.<sup>77</sup>

### Cultural Buildings

Public buildings such as libraries, museums, and community centres, which acting as containers of public life and where citizens negotiate evolving cultural values such as beauty, democracy or literacy.

### Critical Spatial Practice

A form of spatial practice between theory and practice, public and private, and art and architecture guided by self-reflection and social transformation combining the critical, the spatial and the interdisciplinary.

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<sup>75</sup> Gibson, *The Ecological Approach to Visual Perception*.

<sup>76</sup> Qian, 'Geographies of Public Space', 85.

<sup>77</sup> Turner, *The Ritual Process*.

### Design Approach

The methodological framework that directs how designerly capacities –skills, sensitivities, and ways of knowing– are mobilised in practice, defining how the designer engages with a context or problem.

### Late Modernity

A sociological term describing an era marked by rapid change, fluid identities, and blurred boundaries between private and public.<sup>78</sup>

### Liminality

A state of transition between two conditions or spaces holding potential for transformation, subject to uncertainty and ambiguity and defined by a threshold, not a boundary.

### Makerspace

A collaborative workspace in a library where users can learn, experiment, and create using various tools (such as 3D printers, electronics or crafts).

### Performative Turn

In public libraries, it shows the transition from passive knowledge repositories to active, participatory spaces for creation, interaction, and learning.<sup>79</sup>

### Publicness

“A collective ambience or habitus invoked contingently through inhabitation, affective atmospheres and materialities.”<sup>80</sup>

### Public Threshold

The liminal space where individuals transition from private life into public life, comprising both material and immaterial dimensions that can be intentionally shaped through design.<sup>81</sup>

### Response-ability

A designerly capacity to remain engaged with complexity, contradiction, and situated entanglements by “staying with the trouble” and cultivating collective knowing and doing.<sup>82</sup>

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<sup>78</sup> Bauman, *Liquid Modernity*.

<sup>79</sup> Jochumsen et al., ‘Towards Culture 3.0–Performative Space in the Public Library’.

<sup>80</sup> Qian, ‘Geographies of Public Space’, 78.

<sup>81</sup> Muñoz Aparici, ‘Public Thresholds: Experimenting with Public Value Creation through Spatial Interventions in Public Buildings’.

<sup>82</sup> Haraway, *Staying with the Trouble*.

### Rite of passage

A process or ritual of transition from one state of being to another.<sup>83</sup>

### Situatedness

The idea that knowledge, behavior, or meaning is shaped by the specific social, cultural, spatial, or political context in which it occurs and is inherently partial, challenging the notion of objective, universal truths.<sup>84</sup>

### Spatial affects

Pre-conscious intensities and forces that emerge from and shape the relational dynamics between bodies, spaces, and material environments shaping how individuals feel, behave, and interact within those spaces.<sup>85</sup>

### Spatial intervention

A deliberate modification of the built environment aimed at altering its use, perception, or function, often with experimental aspirations between artistic and spatial practice.

### Spatial Design

Design practice concerned with shaping space as a relational and experiential construct beyond functional or professional divisions integrating aspects of architecture, interior, landscape, and urban design.<sup>86</sup>

### Threshold

A transitional boundary that both separates and connects spaces or states, facilitating and regulating passage while embodying potential transformation.<sup>87</sup>

### Transdisciplinarity

Collaboration crossing conventional disciplinary boundaries, focusing on a shared problem through shared methodologies and theories towards integrative solutions.<sup>88</sup>

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<sup>83</sup> Van Gennep, *The Rites of Passage*.

<sup>84</sup> Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'.

<sup>85</sup> Thrift, 'Intensities of Feeling'.

<sup>86</sup> Exner and Bielefeld, *Basics Spatial Design*, 7.

<sup>87</sup> Stavrides, 'Common Space as Threshold Space: Urban Commoning in Struggles to Re-Appropriate Public Space', 4.

<sup>88</sup> Bruyns and Kousoulas, 'An Introduction to Design Commons', 17.

# 2 Modes of Enquiry

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Ways of Doing and Knowing  
through Design-Driven Research

This chapter establishes the methodological foundations of the dissertation by presenting Design-Driven Research (DDR) as a situated, relational, and embodied mode of enquiry for investigating the activation of public space. DDR is framed as a response to three persistent disciplinary challenges: the epistemological gap between theory and design practice, the divide between architecture and urban design, and the difficulty in testing hypotheses in the built environment. These divisions constrain the capacity of public-space design to address contemporary urban complexity and to enable meaningful transfer between theory and practice.

Building on the evolution of design research, this chapter positions DDR as a generative framework in which knowledge emerges through the act of designing. The methodological approach integrates a literature review, case study analysis, collective creation, spatial experimentation and critical reflection. This hybrid theory–practice structure produces insights embodied in artefacts, interventions, and design processes made explicit through the designer-researcher’s critical reflexivity. This chapter argues that design cases yield situated findings that become transferable only when articulated through reflection on positionality and situatedness. Ultimately, DDR becomes a form of world-making capable of bridging theoretical concepts and material realities to co-produce knowledge of publicness and spatial transformation.

- # Design Driven Research
- # Public Space Activation
- # Spatial Experimentation
- # Critical Reflexivity
- # Co-Creation

## 2.1 Methodological Positioning

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### 2.1.1 Bridging Theory and Practice in Public Space Research

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Design-driven research aims to be an operational bridge between conceptual thinking and spatial practice. Public space has been extensively researched in theory as an abstract concept connected to its *zeitgeist*. Yet, in the context of growing urbanisation, public space design is a crucial tool for shaping urban futures, as public space is the ground on which citizens negotiate collective meanings.<sup>89</sup> Therefore, there is enormous potential in discovering ways to connect public space theory and practice into design-driven approaches that can adapt to changing times and provide answers (and questions!) to both public space designers and researchers.

The objective of the current study is to explore how public spaces can be activated through their *publicness*. To do so, the task is to translate theoretical concepts such as publicness, public sphere, liquidity, and threshold into hypotheses and eventually testing them through design experiments (Fig. 2.1). While spatial hypotheses can be articulated at a theoretical level, assumptions about how publicness alters public life in the urban realm require actual demonstration. Such assumptions need to be examined through tangible spatial interventions or, where implementation is not possible, through design speculation that renders these hypotheses explicit and open to critical reflection.

In this study, design serves as a shared platform that grounds theory in practice and abstracts it into theory, braiding concepts and experiments into a coherent trajectory (Fig. 2.2). Combining the literature review, case study analysis, co-creation activities, speculative designs, and spatial interventions ensures that the outcomes remain both theoretically grounded and practically relevant. The research showed that, for designers to connect research and practice through design-driven research, designer capacities must be expanded beyond conventional disciplinary and epistemological frameworks.<sup>90</sup> Confronting the respective codes, logics, and languages of theory and practice enables a productive exchange that ultimately contributes to both bodies of knowledge. Finally, the theoretical insights extracted from this research can inform the design of public spaces, thereby improving design processes and products and their effects on the city.

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<sup>89</sup> Lefebvre, *The Production of Space*; Massey, *For Space*.

<sup>90</sup> For more information on the designer capacities, see Chapter 3 “Overcoming Disciplinary Stupidity”.

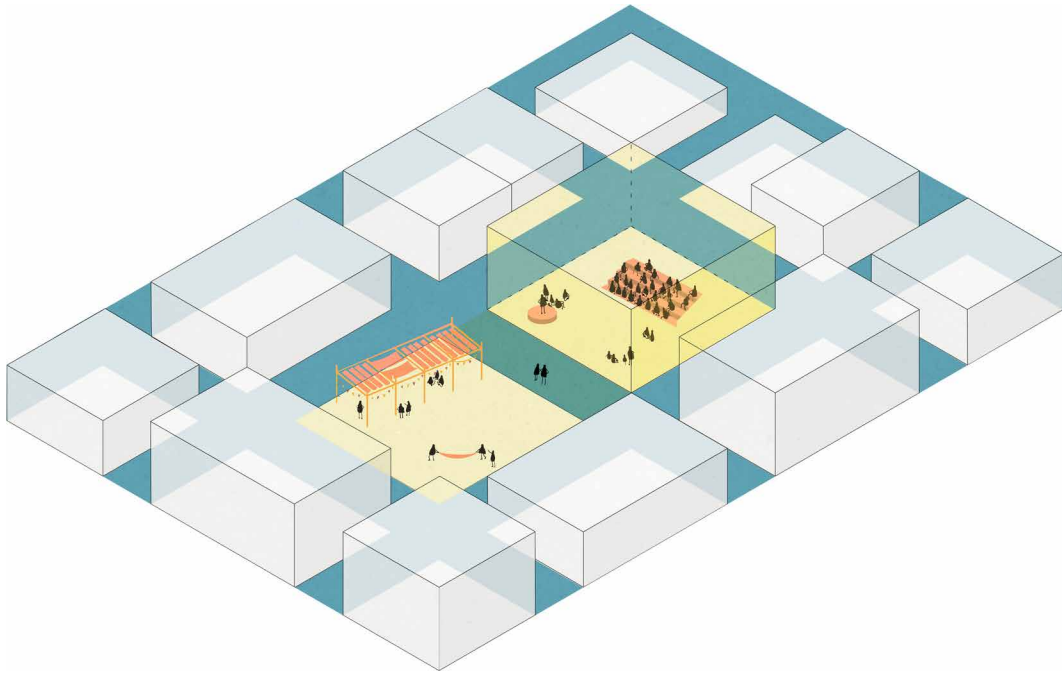


FIG. 2.1 Early conceptual diagram explaining publicness activation experiments in public space. Offering indoor and outdoor affordances that bridge the building's façade expanding the public threshold.

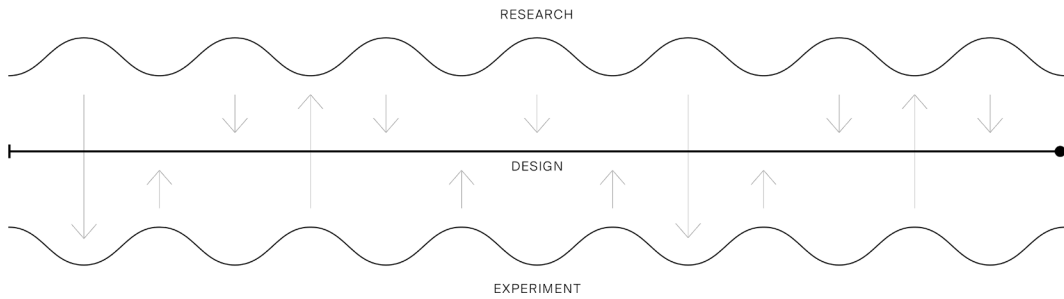
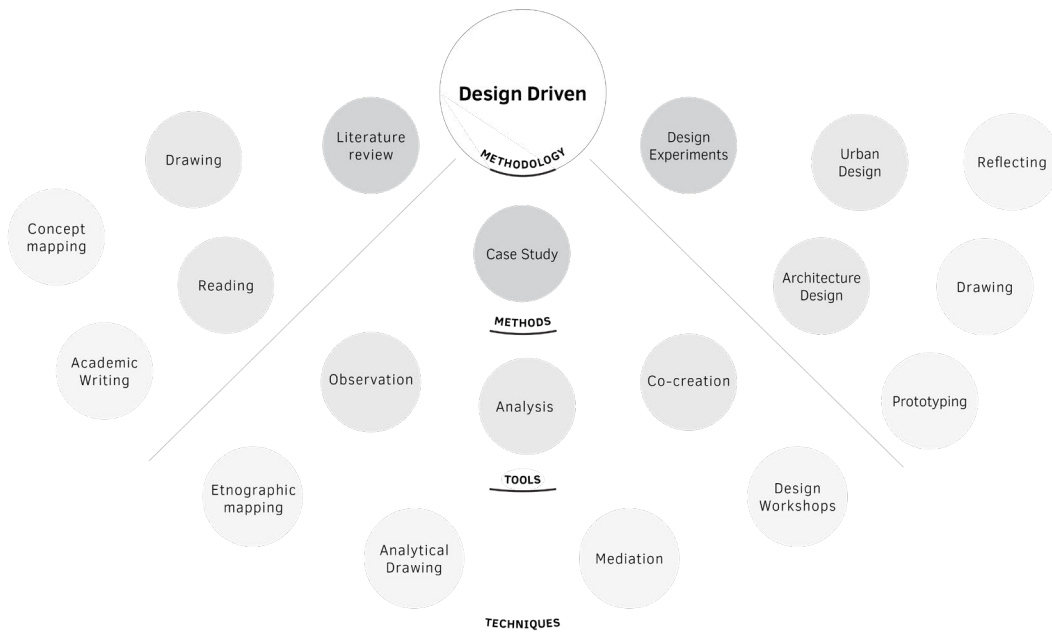


FIG. 2.2 Design is the central spine of the study translating between the research and the experiments.

## 2.1.2 Bridging Architecture and Urban Design

As much as there is a division between theory and practice, there is also one between the disciplines of architecture and urban design, even though both are concerned with public spaces. Public space is as much an exterior as it is an interior reality. Whether on the street, under a pergola, or inside a building, the citizen's experience of public space, or public experience, is one continuum. Therefore, the epistemological division between architecture and urban design in public spaces is counterproductive. Unfortunately, in public space design practice, there is an unreal division marked by the building envelope that impedes beneficial exchanges between architecture and urban design. Using design as an interdisciplinary common ground can integrate architecture and urban design approaches to public space design.

Design-driven research approaches are a solid way to articulate and test theoretical hypotheses about public spaces by transforming them into design premises crossing disciplinary and epistemological divides. These approaches utilise research methodologies, including methods, tools, and techniques, proper to design practice and theory, to collect and analyse research data.



**FIG. 2.3** Using methods, tools and techniques from multiple disciplines, the research approach in the study is driven by design. Besides co-creation, experimental spatial interventions and literature review, an array of supporting tools and techniques were employed along the trajectory.

This means that, apart from borrowing tools and techniques from other areas of knowledge, design tools and techniques such as drawing, models, prototyping, speculation, or participation are braided into a consistent research framework (Fig. 2.3).

Historically, there has been a distinction between traditional academic research, grounded in the empirical and analytical approaches of the sciences or humanities, and research produced by creative practices, privileging the former as “proper research”. Empirical and analytical approaches have been seen as more rigorous and replicable than creative research approaches in music, dance, art, or design. Traditional scientific and humanities-based paradigms have long dominated architectural research, often marginalising the designerly and performative aspects of practice.<sup>91</sup> Exploring research through design opens a productive field in which design research can offer valuable responses to the complex challenges of our time.

## 2.2 Design Research and Architecture

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### 2.2.1 From Design Science to Designerly Ways of Knowing

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Design research originated in the UK in the second half of the 20<sup>th</sup> century, when industry and academia sought modernisation through new methods and approaches.<sup>92</sup> The 60s marked a turning point for design research, as Buckminster Fuller called it, in the “Design Science Decade”.<sup>93</sup> He advocated for a “design science revolution” to solve the complex problems of the time by combining science and technology.<sup>94</sup>

Furthermore, the term “design methodology” as an independent mode of enquiry was first coined at the Conference on Design Methods, which was held in London in September 1962. However, these early design research definitions often focused on the scientific, rational, and logical aspects of design, neglecting creativity, intuition, reflexivity, and situatedness.

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<sup>91</sup> Bolt and Barrett, *Practice as Research*.

<sup>92</sup> Cross, ‘Designerly Ways of Knowing’.

<sup>93</sup> Fuller and McHale, ‘World Design Science Decade, 1965-1975’.

<sup>94</sup> Cross, ‘Designerly Ways of Knowing’.

In the 70's, the Design Research Society and the Design Studies Journal, with proponents such as Nigel Cross and Bruce Archer, provided a platform for exploring design research as a third epistemological area in research and education, distinct from science and the arts or humanities.<sup>95</sup> Design was not a tool for producing knowledge but a way of generating knowledge through “designerly ways of knowing”.<sup>96</sup>

Having accepted design research as a form of knowledge generation, the discourse over the following decades focused on explicating the different articulations of these terms. Departing from Archer's early categorisation (research about/for/through practice),<sup>97</sup> Frayling untangled the relationship between the two terms through their connecting prepositions: into, for, and through design.<sup>98</sup> Research into design investigates *about* design, often using scientific or humanistic methods (i.e. architectural history, theory or aesthetics). Research *for* design supports design practice through materials, tools, or methods for the act of designing (materials and technologies). Finally, research through design is a method of enquiry that produces new knowledge through design practice, where that knowledge is “embodied in the artefact”. In research through design, design can simultaneously produce and embody knowledge.<sup>99</sup> Design's epistemology thus became defined by its doing-thinking reciprocity: knowledge emerges from the act of designing itself, reversing the conventional order of research methods: knowledge is not generated prior to design but *through* design.<sup>100</sup> Although research into and for design is integrated into academic institutions, research ‘through’ design is still being explored in relation to the relationship between theory and practice. This general evolution of design research, with its focus on ‘research through design,’ resonates particularly and poses unique challenges within architecture and urban design.

The notion of a “designerly way of knowing”, proposed initially within design studies, has been extended to architecture to articulate its particular position between research and practice.<sup>101</sup> Architecture has historically balanced art, science, and technology, and its research has long been dominated by scientific and humanities-based paradigms, often marginalising the designerly and performative aspects of

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<sup>95</sup> Archer, ‘Whatever Became of Design Methodology?’

<sup>96</sup> Cross, ‘Design as a Discipline: Designerly Ways of Knowing’.

<sup>97</sup> Archer, ‘The Nature of Research’, 10.

<sup>98</sup> Frayling, *Research in Art and Design*.

<sup>99</sup> Roggema, ‘Research by Design’.

<sup>100</sup> Rendell, ‘Architectural Research and Disciplinarity’, 143.

<sup>101</sup> Luck, ‘Design Research, Architectural Research, Architectural Design Research’.

practice.<sup>102</sup> Therefore, there is a disciplinary dimension to design research, where architectural design research possesses particularities.

As Rendell states, architecture does not fit the definition of a discipline because it draws on multiple methods of practice; however, it can be seen as a subject that gathers disciplinary approaches around a shared object of study. The integration of diverse modes of enquiry, following its distinctive practice of architectural design, makes it both a unique subject and a discipline.<sup>103</sup> Thus, architectural research blurs the distinction between disciplines, combining the analytical rigour of deductive science, interpretative depth of the humanities, and creative speculation of art. While productive, this interdisciplinarity has generated ongoing debates about identity and disciplinarity.<sup>104</sup> These debates have developed to this day through an array of communities of practice and research (re) defining the interdisciplinary nature of architectural design research.

## 2.2.2 Design-Driven Research in Architecture

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Accepting architectural research design as a field of research in its own right still poses some complexities, since design does not always play the same role in research.<sup>105</sup> To capture the multiple approaches to design research (such as practice-based, design-led, or design-based), the term design-driven research emerged, integrating earlier categorisations of design into, for, about, or through design. However, design-driven research focuses on research through design. Design-Driven Research is a methodological approach that uses design as both the subject and mode of enquiry, employing tools, techniques, and methods native to design practice.

Therefore, the epistemology of DDR in architecture can be described as “*situated, relational, and embodied*”.<sup>106</sup> It acknowledges that design knowledge is produced in a situated context through materials, sites, bodies, and social interactions. Because of the tacit and performative nature of design practice, these knowledges require their explication to make the contribution assessable and transferable through

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<sup>102</sup> Rendell, ‘A Way with Words’.

<sup>103</sup> Rendell, ‘Architectural Research and Disciplinarity’, 143.

<sup>104</sup> R. Luck, Design Research, Architectural Research, Architectural Design Research: An Argument on Disciplinarity and Identity (2019).

<sup>105</sup> de Walsche, ‘By Design, or Within Culture? A Reflection upon (Artistic and Architectural) Design-Driven Research’, 24.

<sup>106</sup> Doucet and Frichot, ‘Resist, Reclaim, Speculate’.

documentation, articulation, and reflection. It is the task of the designer-researcher to make the tacit, situated, relational, and embodied knowledges visible to others, turning them into research.

Furthermore, the insights produced by DDR in architecture and urban design are generative and performative, where generative refers to its capacity to *produce and project* knowledge and performative denotes its ability to *enact and evidence* that knowledge through situated action.<sup>107</sup> The research results of that generative action lie not only in the final research/design result but also in what the act of designing/researching reveals. Contrary to the written theory, the design research process becomes a meta-result for exploring questions and generating insights. In addition, contrary to standard research processes, design research does not always start with the first launching research questions and then finding answers. Often, it generates actions that, through reflection, clarify their contribution to knowledge.<sup>108</sup>

The challenge for the academic legitimisation of Design-Driven Research hinges on the critical issue of evaluation. Traditional research assessments are frequently based on the interpretation of accredited experts. Assessing research that is process-oriented, reliant on tacit knowledge within a specific community of practice, and deeply embedded in subjective practice presents a dilemma: how to evaluate the quality of an individual, innovative, artistic practice against a “common agreement on what is excellent”.<sup>109</sup> To navigate this, the ideal evaluation is characterised as a “mutual learning process”.<sup>110</sup> In this model, both the evaluator and candidate learn from the shared experience, fostering positive development rather than simply delivering a verdict or final judgment. Such a collaborative and dialogical approach is essential for a field in which knowledge is co-constructed through shared practice and reflection and stands in contrast to a top-down model.

Today, architectural and urbanistic DDR is recognised and supported by institutions worldwide that integrate research by design into their academic programmes to some degree. The publication of frameworks at the European level that advocate and support these approaches, such as the Vienna Declaration on Artistic Research, and the European Association for Architectural Education (EAAE) Charter of Architectural Research, has boosted the recognition and impact of design research in the

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<sup>107</sup> Borrego et al., *CA2RE+ 3 – Frameworks of Design-Driven Research*, 18.

<sup>108</sup> Rendell, ‘A Way with Words’.

<sup>109</sup> Jallow and Postiglione, ‘Questions on Evaluation in the Artistic Field’, 118.

<sup>110</sup> Jallow and Postiglione, ‘Questions on Evaluation in the Artistic Field’, 118.

European context.<sup>111</sup> In this growing environment, some communities of practice have formed for design-driven research in the arts and architecture, such as ARENA (Architectural Research European Network Association), DR\_SoM (Design Research Series on Method), ADAPT-r (Architecture, Design and Art Practice Training-research) and CA<sup>2</sup>RE (Community for Artistic and Architectural Research).

## 2.3 Research Approach

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### 2.3.1 The Designer-Researcher and Situated Agency

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Because of its eminently material nature, design tools and methods seem most appropriate for this research's purpose of investigating public space activation. The study follows a Design-Driven Research (DDR) approach, a methodological framework in which design is a tool, an outcome, and a mode of enquiry. In its purest form, DDR is a research methodology that conducts research through design, exploring and testing theoretical ideas in space through spatial interventions, prototypes, and artefacts. Design becomes a means of thinking and doing simultaneously, where knowledge is generated not a priori but through the act of designing.

DDR acknowledges the inherently situated nature of design in time and space, both as a process and as a material product.<sup>112</sup> Situatedness is a product of “bodily, social, environmental, and cultural interactions” involving all participating agents, including designers.<sup>113</sup> Therefore, it is essential to recognise its relational nature and the designer's agency.

In this research, combining research and practice through DDR, the author holds a dual role as both researcher and designer by thinking and doing. Design serves as the driving force behind the investigation by exploring theoretical concepts, using design tools to understand and expand them, and finally launching spatial hypotheses to address theoretical gaps grounded in an epistemological embrace of situatedness and relational practices of world-making.<sup>114</sup>

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<sup>111</sup> *The Vienna Declaration on Artistic Research; EAAE Charter on Architectural Research*

<sup>112</sup> Muñoz Aparici, 'Makerlabs: Makerspaces in Libraries as Modern Spaces of Urban Belonging', 70.

<sup>113</sup> Langdridge, 'Situatedness'.

<sup>114</sup> Haraway, *Staying with the Trouble*.

Relational and situated design approaches revolve around the designer's capacity to cultivate these relationships. Traditionally, relational and situated approaches have not been part of design education or design processes. It then becomes the designer's initiative to develop contextual and sociocultural awareness, sensitivity to socio-spatial relations, and the interpretation of tacit knowledge. One way to integrate these layers is to perform collective creation as a gathering of collective intelligence.

Designers hold agency as actors rooted in a situated ecology. Employing design as a method requires them to reflect on their positionality, tacit assumptions, and biases through questioning their position, perception, and agency to define the research's rigour and delimit what can legitimately be claimed as knowledge.

### 2.3.2 Critical Reflexivity and Iterative World-Making

The research process integrates analysis, co-creation, design, experimentation, observation, reflection and iteration (Fig. 2.4). Analysis allows the researcher to understand how spatial and social dynamics unfold in real contexts; co-creation situates the design process within collective intelligences, incorporating diverse perspectives and local knowledges; experimentation tests hypotheses through design actions, treating the built environment as a living laboratory; and reflection helps extract learnings and launch new hypotheses for iteration. Together, these steps enable a form of enquiry that is both empirical and speculative, anchored in real situations, yet oriented towards methodological approach transferability.

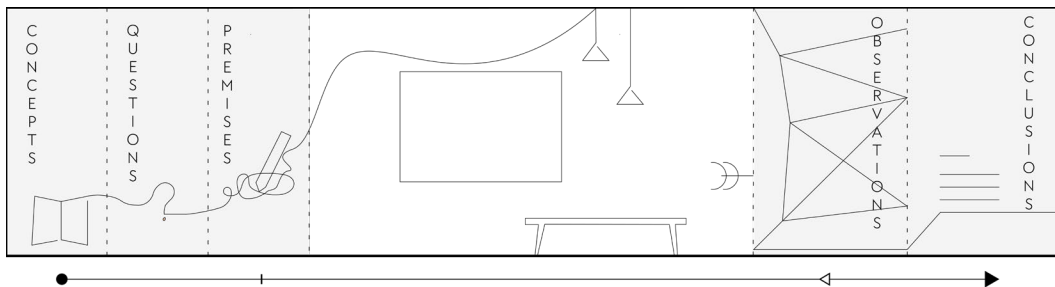


FIG. 2.4 Research develops between the main stage, where experiments occur, and the back stage, where concepts are turned into questions and premises, and by observing, results are turned into conclusions.

The knowledge produced by DDR is embodied, relational, and situated; that is, it arises from complex interactions among people, spaces, materials, and meanings within specific socio-spatial contexts. Rather than aiming for universal truths, DDR values situated knowledges, acknowledging that the researcher-designer's own position, background, and sensibilities inevitably shape the process and its outcomes. Instead of departing from a priori overdetermination, this study embraces empirical "multiplicity" as productive: the uniqueness and interconnected complexity of all things.<sup>115</sup> Recognising complexity does not imply attempting to control or eliminate it, but rather to understand it and include it in the design. Design-driven research adapts to the contingencies of situated practice through continuous reflection and redefinition of its methods.

Moving continuously between conceptual reflection and practical experimentation, this research unfolds as an iterative and cyclical process. Consequently, the approach employed was intentionally non-linear and open-ended. Instead of following a rigid, predetermined sequence of steps with a clear endpoint in mind, this research adopts a continuous 'back and forth' exercise between theoretical analysis and design action. This non-linear strategy maximises synergy among different research components by welcoming flexibility and hybridity as driving forces. In this process, the development of concepts (theory) and the production of spatio-temporal configurations and designs (practice) run in parallel, forming entangled modes of production, for instance, by developing the literature review and design premises simultaneously. The aim is to iteratively approach the topic through continuous design and research cycles until clear patterns and findings become explicit.

Ultimately, the DDR approach adopted in this study positions design as a critical and reflective practice capable of bridging disciplines, connecting the conceptual and material, and revealing the relational nature of public spaces. Through iterative experimentation and reflection, it seeks not only to understand but also to actively shape the spatial, cultural, and social conditions that constitute public life. Therefore, reflexivity plays a key role: by critically observing how personal, disciplinary, and cultural perspectives influence design decisions, the researcher ensures that the research remains relevant, transparent, and ethically grounded, thereby increasing its transferability.

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<sup>115</sup> Deleuze and Guattari, *A Thousand Plateaus*.

### 2.3.3 Personal Design-Driven Research Approach

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As it became clear from the hybridity and continuous redefinition of Design-Driven Research, there are as many DDR approaches as there are designers/researchers. In my doctoral project, the choice of a design-driven approach was made simultaneously with the choice of topic. Being a practitioner and designer at heart, conducting research through design was the only natural way. Although the topic of public space activation has continuously evolved in the research trajectory, DDR has been a steady factor in research development. Ultimately, this dissertation contributes to the bodies of knowledge of public space theory and public space design. Specifically, the designerly approach to activating existing public spaces can be replicated and adapted by other designers in other situated contexts.

In this particular approach to DDR, the topic of public space was investigated through thinking-by-making. Analytical research was conducted in parallel with the experiments in a dialectical, back-and-forth manner. A generative process in which research questions are first explored through actual design actions and later extrapolated to the abstract theoretical level, reversing the conventional order of research methods. Knowledge was not generated before the experiment and then tested; it was produced by it.<sup>116</sup>

The research process followed a cyclical logic similar to that outlined in other DDR models: design, experimentation, and reflection. Throughout these cycles, the author operated in a dual role as designer and researcher in constant negotiation between intuition and analysis, and between creative production and methodological rigour. Therefore, reflexivity and explicit positionality became integral to the research's rigour and transferability. Making design decisions explicit by accompanying them with critical reflection on their motivations, effects, and implications within the broader research trajectory. In this context, the design processes became both the object and method of the study.

Because public space design touches upon multiple disciplines and scales, the design approach was decisively transdisciplinary and multiscalar, drawing on urban design, architecture, and interior designing. Consequently, the employed tools, techniques, and methods, both DDR and traditional, such as literature reviews, crossed disciplinary boundaries. Reading, writing, drawings, texts, artefacts, lectures, exhibitions, and workshops created a multiplicity of outputs reflecting approaches to public space activation.

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<sup>116</sup> Rendell, 'A Way with Words'.

Building on the idea that collective creation can activate public spaces, the author actively sought and selected case studies throughout the process. The common themes among these case studies were the authors' agency, the need to activate publicness, and the potential for spatial experimentation. Once submerged in each case study, collective creation with ecosystem actors helped generate situated knowledge. Combining collective situated knowledges with analytical research hypotheses led to spatial designs that served as embodied experiments. These experimental spatial designs include artefacts, interventions, or speculations materialising spatial hypotheses, not to confirm predetermined results but to produce situated insights. Spatial design, understood as embodied propositions, served not only to verify hypotheses but also to investigate emergent topics that later fed back to the general research process.

Public space became a living laboratory for observing the social, material, and ecological effects of the designed interventions. An approach that embraces complexity, uncertainty, and situatedness as drivers of reimagining collective spaces that act as catalysts for change. Ultimately, the overlay of multiple reflections on the design interventions produced knowledge of how design and design approaches can activate public spaces.

## 2.4 Research Design

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This dissertation is an experimental research project in which the author's public space design practice during the thesis timeframe forms a body of work from which analysis and findings could be extracted.

In parallel with the literature review and theoretical exploration, the designer/researcher identified and selected design assignments to address the research gaps identified. Although not all the author's design assignments during the thesis period are included in the dissertation, they all contributed to the elaboration of the design approaches. In other words, the designs have transformed the designer/researcher, thereby changing the approaches to design practice. Design can be understood as an act of becoming together with space, in which spatial relations, bodies, and materials co-constitute one another. Drawing on Deleuze and Guattari's notion of *becoming*, Haraway's concepts of becoming-with and worlding, and Helene

Frichot's "becoming-with the world," design emerges as a relational, embodied, and embedded mode of enquiry where space and designer co-emerge.<sup>117</sup>

Design assignments constituted case studies if they related to the research question of how public spaces in existing public buildings can be activated through design. These cases turned theoretical hypotheses into concrete, design-based premises for testing in the physical world, following three steps: design, implementation, and reflection. Some cases were fully implemented in space, resulting in actual spatial experiments, whereas others were partially implemented or remained speculative designs. Regardless of their implementation, all case studies contributed to expanding knowledge of design approaches to activate public spaces. Cases function as particular cases that lead to independent research results but are also iterative instances of the broader research question. The strength of this study lies in the overlay of the cases and the different insights they yield.

Each design case generates new insights, which are then reflected upon and reinserted into the next design cycle. This back-and-forth between theory and practice constitutes an analytical and generative mode of world-making. In this way, design does not merely illustrate theoretical ideas but actively contributes to and expands them, bridging the traditional gap between architectural research and practice.

Cross-comparing the design case studies led to insights on both the research method and theory. First, reflecting on the cases from within their situatedness aimed to explicate the specific findings. The findings were positioned within the theoretical framework by comparing them with other cases and relating the resulting knowledge to a broader field. The knowledge produced contributed to reflecting on the method—i.e., spatial interventions as a scalable research tool—and the theory—i.e., public space accessibility as a liminal transition.

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<sup>117</sup> Deleuze and Guattari, *A Thousand Plateaus*; Haraway, *Staying with the Trouble*; Frichot, *Creative Ecologies*.

## 2.5 Methods and Tools

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### 2.5.1 Collective Creation as a Design-Driven Method

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As previously mentioned, this design-driven research project used collective creation to gather situated knowledge. Co-creation is a situated mode of enquiry that extends DDR's generative, performative, and interdisciplinary framework of DDR.

This research's co-creation approach draws on Haraway's situated knowledges and Braidotti's embodied, embedded, and relational perspectives.<sup>118</sup> While DDR translates theory into design, co-creation ensures that these translations include and respond to the situated knowledges of collective intelligences. Knowledge is produced through situated collective intelligences embedded in places, bodies, and social relations. Collective creation for design goes beyond traditional citizen participation tools, such as consultation, towards a shared act of collective problematisation to collectively uncover shared *matters of concern*.<sup>119</sup>

Co-creation is a process of thinking-by-making in which spatial questions are collaboratively defined and redefined by the agents of a situated ecology.<sup>120</sup> Collective creation focuses on the design process developed by agents, not the design product. It is not about choosing the colours or letting citizens pick the furniture; co-creation is a tool for worlding together".<sup>121</sup> Including co-creation in design research challenges authorship, as it decentralises it, acknowledging that design knowledge emerges from multiple voices and experiences.

In this research project, co-creation connects design action and reflection. The gathered situated collective knowledges formed the basis for the research hypotheses, artefact ideas, and spatial interventions, although not all ideas, decisions, or actions were collectively negotiated. Co-creation differs from co-design

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<sup>118</sup> Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'; Braidotti, 'Foreword'.

<sup>119</sup> Deleuze, *Difference and Repetition*.; Latour, 'Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern'.

<sup>120</sup> Sanders and Stappers, 'Co-Creation and the New Landscapes of Design'; Latour, *Reassembling the Social*; Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'.

<sup>121</sup> Haraway, *Staying with the Trouble*.

in that these moments of collective ideation occur within specific design/research moments, yet the designer/researcher's agency remains.

In the cases discussed in Section 3, co-creation bridged theoretical enquiry and spatial experimentation. Workshops and conversations were the first step towards recognising an ecology, its agents, and its affects in this ethico-aesthetic approach.<sup>122</sup>

Co-creation was a relevant and recurring tool for catalysing collective knowledge, action, and affect towards public space activation. Owing to case-specificities, co-creation was not used in all design cases. However, the design approach of collective worlding as an ethico-aesthetic practice, in which agents, including the designer/researcher, problematise together in an embedded, embodied, and relational manner, prevailed. The MAKERLAB project was a systematic and iterative tool that galvanised the situated collective values of each library into a situated design strategy. In Limen and De Hilleviet, it became a tool for creating a public, allowing the community to recognise itself around the shared problem of accessibility.

However, co-creation is a negotiation process that embraces diversity and complexity, and therefore, uncertainty and conflict. To integrate collective creation in design, one must acknowledge differences, failures, and stupidity as productive forces. Stepping down from the designer-as-master-of-all role and considering nonexpert voices as equally valid challenges disciplinary boundaries and broaden inclusion in the design process. Instead of focusing on achieving a smooth consensus, it is about exploring together multiple perspectives. Incorporating co-creation as a design tool transforms DDR into a plural and reflexive methodology for inclusive design.

## 2.5.2 Reflexivity and Research Communities

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Reflexivity is an essential component of design-driven methodologies. Making positionality and situatedness explicit through reflexivity challenges the limitations imposed on design. Instead of being considered research limitations, they become boundary conditions, endowing the process with social relevance and validation.

Because DDR embraces situatedness and openness as ways to engage with the complexity of the real world, critical reflexivity is key to fostering transferable research results. To do so, design-driven research must uncover the dynamic

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<sup>122</sup> Guattari, *The Three Ecologies*; Latour, *Reassembling the Social*; Frichot, 'Foaming Relations: The Ethico-Aesthetics of Relationality'.

interplay between the explicit, implicit, and unknown dimensions of design practice. Explicating the design's boundary conditions and the designer's positionality through critical reflection is necessary to clarify how the author's design approach may be interpreted, adapted, or transferred to other contexts. Therefore, reflexivity in DDR clarifies how exposing the apparent limitations arising from the designer's positionality and design situatedness shapes research conclusions.

Reflexivity in this research project addresses three aspects of design: process, product, and designer.

- Reflection on the design: Looking back at the design work to contextualise the decisions and results and to extract conclusions and results contributing to public space theory.
- Reflection on the designer: This reveals the designer's positionality and agency in the design process and spatial ecology.
- Reflection about design: analysing the design process and its tools, techniques and approaches to distil findings on design research. i.e. co-creation

These three forms of reflection constitute the epistemic framework through which the experimental data from the cases become research findings, rather than remaining purely descriptive. First, reflecting on the case's design is common to other architectural research approaches, not design-driven ones. Historical or technical research often analyzes design decisions, factors, and processes to draw conclusions.

Second, another essential aspect of design-driven research is the role of the designer as a research actor with a recognised agency. Common research approaches assume the researcher to be an objective external entity and therefore do not explicate their positionality or embeddedness. However, architecture is an ethico-aesthetic practice of an embedded, embodied, and relational nature. Hence, in design-driven research in architecture, the designer/researcher cannot be separated from the material reality of a place and its agency in the urban environment.

To reflect on the embodied, embedded, and relational positionality of the designer in the design case, the designer/researcher continuously ponders: Who am I? What do I see that others do not? What do others see that I do not? What are my assumptions? The current doctoral research cannot be separated from the author's positionality as a designer/researcher. Design cases were selected and developed from the embeddedness of a trained female architect born in Spain, working in the Netherlands, and using Dutch as a second language. These apparently irrelevant aspects influence the design and, therefore, the research findings.

Finally, reflecting *on* design as a method to elucidate the relationships among tools, techniques, approaches, and design results helps build knowledge of design-driven research. In terms of the design tools used, collective creation is a productive tool for generating insights into the situatedness and positionality of design cases and designers. Collective creation is also a reflexive tool for mapping the positionality and situatedness of design cases within their ecology and in relation to the designer's agency.

Reflecting on the multiplicity of situatedness and positional realities around the design cases is the first step towards separating the singular from the common and extracting the actual research findings that could contribute to the body of knowledge in the field. These specific characteristics are the boundary conditions for the design and are inextricably connected to the design process and results. Critical reflexivity thus becomes a tool for distinguishing replicable methodological and theoretical insights from the particular characteristics of each design case.

## 2.6 Research Framework and Evaluation Context

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### 2.6.1 The CA<sup>2</sup>RE Network: Caring for Design-driven Research

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CA<sup>2</sup>RE (Community for Artistic and Architectural Research) is a collaborative platform dedicated to advancing design-driven and practice-based research in architecture, art, and design. Inheriting the European tradition of design research (ARENA, DR\_SoM, ADAPT-r) and supported by influential organisations such as the EAAE, ARENA, and the European League of Institutes of the Arts (ELIA), it holds space to evaluate personal design-driven research approaches in architecture. Through moments of collective transdisciplinary evaluation, it promotes dialogue between junior (doctoral candidates) and senior researchers, fostering peer feedback, collective reflection, and mutual learning. <sup>123</sup>

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<sup>123</sup> Jallow and Postiglione, 'Questions on Evaluation in the Artistic Field', 118.

Every six months, the community meets at multiple-day conferences hosted by universities across Europe. Presenters are chosen through a blind peer review of their abstracts/artefacts/papers based on research relevance and a design-driven approach. At the event, researchers present their work-in-progress to a selected transdisciplinary panel during a 30-minute presentation and a 30-minute deep-dive evaluation. This dialogical evaluation format constitutes a second peer review process. Afterwards, they resubmit their updated abstracts/artefacts/papers, including the panel feedback. These products are then published and archived to contribute to the growing body of knowledge. Keynotes and workshops during the meetings expand the scope and perspectives on DDR and present the approaches of individuals and institutions, situating the researcher's creative work within existing academic frameworks while preserving and enhancing its personal and exploratory nature. CA2RE Conferences are often considered transformative, safe spaces where presenters can share their research aspirations and vulnerabilities. Therefore, it is not surprising that most presenters are recurrent, returning throughout their research trajectories to share their developments with the community.

Building upon the CA2RE Community, the Erasmus+ CA2RE+ project from 2019 to 2022 deepened the methodological, pedagogical, and evaluative dimensions of Design-Driven Doctoral Research (DDDR). Eleven institutions across eight EU countries co-created an experimental, collective evaluation model, advancing the recognition and rigour of DDDR across Europe. A six-step iterative process corresponding to the conference titles (Observation, Sharing, Comparison, Reflection, Reformulation, and Recommendation) encouraged cumulative learning and reflexive evaluation, culminating in three publications. After the project's completion, the CA2RE community continued its conferences and activities.

## 2.6.2 **A community of Practice and Care: transformative support to the doctoral trajectory**

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The embeddedness of this doctoral research in the CA2RE Network from its very early beginnings ensured a rapid iteration and re-framing of both methodological and topical aspects. Only a few weeks after starting, the research proposal was presented at the Hamburg Reflections Conference in March 2021. Since then and until Zagreb Intersections in November 2023, the research was co-evaluated at every CA2RE Conference, ensuring methodological accuracy and on-track development.

The CA2RE space has been crucial to the development of this research because of its hybrid, interdisciplinary, and practice-based nature. Being a self-funded research by an independent researcher, the impact of these events was noticeable on both the research and the researcher. Finding a community of practice where design-driven research is not misprised but cherished, surrounded by researchers of all levels that CARE for you, ensured that this research came to fruition.

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# 3 Overcoming Disciplinary Stupidity

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## Collective Creation for Diversity and Inclusion in Public Space Design

This chapter reproduces in full, and verbatim, a peer-reviewed journal article previously published as: Harteveld, Maurice, and Mar Muñoz Aparici. 'Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design'. Footprint, no. 36 (2025). <https://doi.org/10.59490/footprint.19.1.7490>. Reproduction is permitted and the content has not been substantively altered.

This article explores the challenge of designing public spaces in hyperdiverse cities and argues that including knowledge often considered 'stupid' is key towards inclusive design approaches. It discusses recent shifts towards co-creation, co-design and placemaking by highlighting the importance of engaging with collective stupidity beyond presumed disciplinary intelligence. The integration of stupid or unconventional ideas in collective creation processes could help better problematise design challenges in public spaces and better engage with diverse perspectives to address diversity effectively. First, we will sketch the main societal pushes and academic turns supporting the enhancement of stupidity through the collective creation of public space for contemporary inclusive and hyperdiverse cities. Then, drawing on a comparative literature study of key authors introducing paradigmatic shifts for today's theoretical framing and understanding of collective creation, diversity and design ethics in public space, we propose a non-conclusive series of design capacities for public space designers. These designer capacities are situated in contextual and sociocultural awareness, sensitivity to socio-spatial relations and narrative enquiry, and designing with the tacit, hence with empathy and responsibility. Finally, we highlight the relation between stupidity and failure in urban design and present relevant success practices. However complimentary to traditional design capacities, we conclude that these ethico-aesthetic approaches might challenge traditional notions of intelligence, beauty or authorship in design in favour of diversity and inclusivity.

# Public space  
# Urban Design  
# Diversity  
# Stupidity  
# Co-Creation #Co-Design

## 3.1 The challenge of designing public spaces in hyperdiverse cities

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Over the last decades, there has been an increasing interest within urban design in getting closer to citizens through civic engagement practices. Building on a longer trajectory of participation, particularly co-design and placemaking have drawn the attention of design research and practice in an attempt to create better living environments together with citizens.<sup>124</sup> These design approaches align with late-modern academic calls to end current urban planning practices. The aim is to recreate the concept of the ‘city’ as a collective resource or, as Patsy Healey puts it, ‘to build governance capacity around shared debates on the multiple qualities of “place” and the diverse ways these are experienced’.<sup>125</sup> Attempts to avoid physical determinism lurk in the high-modern concepts of ‘city’ and ‘planning’, which together with the shift towards the idea of creating ‘our city’ by building ‘shared contexts’ favourably contribute to redefining the practice of design.<sup>126</sup> As the definitions around public space design are continuously contested, revisited and interpreted by researchers and practitioners seeking to revise and recreate collective spaces, so the conception of design itself is also scrutinised.<sup>127</sup> Despite differences in approaches, these attempts share a common goal: to productively gather insights from individuals as well as recognised authorities into public space design processes.

In a democratic belief and value system, any issue concerning the public should be discussed by the public as a collective, especially when considering possible future changes.<sup>128</sup> From this angle, the gathering of collective intelligence insights is essential to informing co-design and placemaking.<sup>129</sup> Collective intelligence in design also responds to the contemporary idea of decentralised and collaborative decision-

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<sup>124</sup> Andersen et al., ‘Participation as a Matter of Concern in Participatory Design’; Antonini, ‘An Overview of Co-Design: Advantages, Challenges and Perspectives of Users’ Involvement in the Design Process’.

<sup>125</sup> Patsy Healey, ‘On Creating the “City” as a Collective Resource’, *Urban Studies* 39, no. 10 (September 2002): 1777–92.

<sup>126</sup> Ibid.

<sup>127</sup> Mattelmäki and Visser, ‘Interpretation of Co-Design and Co-Creation’.

<sup>128</sup> Jane Mansbridge, ‘Everyday Talk in the Deliberative System,’ in *Deliberative Politics: Essays on Democracy and Disagreement*, ed. Stephen Macedo (Oxford: Oxford University Press, 1999), 211–39, 215.

<sup>129</sup> Geoff Mulgan, *Big Mind: How Collective Intelligence Can Change Our World* (Princeton: Princeton University Press, 2017), 145–60.

making processes involving diverse perspectives and expertise.<sup>130</sup> Therefore, the current question – key in this article – is not whether urban designers can contribute to the co-design of public space and placemaking processes, but in what capacity they can harvest collective intelligence to increase citizen inclusion and improve design outcomes for specific public spaces in specific neighbourhoods. It is essential for urban designers to prioritise this issue, as they bear the ethical responsibility of transforming cities into collective resources.

The question of designing for citizen inclusion has become increasingly important to local urban societies around the globe over the past decades.<sup>131</sup> This has been articulated, for instance, in the launch of UN-Habitat's Global Public Space Programme in 2012, and the now well-known definition of Sustainable Development Goal number 11, 'Sustainable Cities and Communities', adopted by the United Nations in 2015. The target to provide universal access to inclusive public spaces by 2030 is a pressing force for change among design professionals around the globe.<sup>132</sup> Particularly, the practice of inclusively co-creating public spaces has become urgent when considering the diversity of local people and their rights to the city.<sup>133</sup> Since public spaces are per se and per definition shared, where people *in situated* contexts collectively negotiate their values, designers' approaches toward public spaces must be especially sensitive to such diversity.<sup>134</sup> Urban designers have considered diverse human associations in cities – public life – as being cities' nature for nearly a century. However, as urbanisation continues, designing for modern life, with its diverse populations, has also become increasingly complex.<sup>135</sup> It is largely since the 1990s that urban populations underwent significant change, leading to a state of 'hyperdiversity (or hyperplurality) that is beyond anyone's ability to understand adequately'.<sup>136</sup> Today, this diversity or hyperdiversity is defined as an

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<sup>130</sup> Hight and Perry, 'Collective Intelligence in Design'.

<sup>131</sup> Mike Douglass and John Friedmann, eds., *Cities for Citizens: Planning and the Rise of Civil Society in a Global Age* (London: John Wiley, 1998).

<sup>132</sup> Chiara Martinuzzi and Joy Mutai, *10 Years of Global Public Space Programme: Annual Report 2022 and Reflections on a Decade of Public Space* (Nairobi: United Nations Human Settlements Programme (UN-Habitat), 2022); United Nations, *Habitat III Policy Papers: Policy Paper 1: The Right to the City and Cities for All* (New York: United Nations, 2017), [www.habitat3.org](http://www.habitat3.org).

<sup>133</sup> David Harvey, 'The Right to the City', *International Journal of Urban and Regional Research* 27, no. 4 (December 2003): 939–41, <https://doi.org/10.1111/j.0309-1317.2003.00492.x>; David Harvey, *Rebel Cities: From the Right to the City to the Urban Revolution* (New York: Verso, 2019).

<sup>134</sup> Maurice Hartevelde, 'Reviewing Premises on Public Spaces in Democratic, Inclusive, Agential Cities', *The Journal of Public Space* 4, no. 2 (2019): 123–43.

<sup>135</sup> Louis Wirth, 'Urbanism as a Way of Life', *American Journal of Sociology* 44, no. 1 (1938): 1–24.

<sup>136</sup> Herbert W. Harris, Howard C. Blue and Ezra E. H. Griffith, *Racial and Ethnic Identity: Psychological Development and Creative Expression* (New York: Routledge, 1995).

unprecedented intense diversification of the population in socio-economic, social, cultural and ethnic terms, while also concerning lifestyles, behaviour and human activities. An increasing number of people do not belong to a single identity.<sup>137</sup> Public space designers are challenged to respect the continuously emerging complex relations in cities. Accordingly, hyperdiversity entails a great challenge and opportunity for public space design. Yet, this is not an easy task, since designers are faced with a complex interplay of cultural dynamics, including both tangible and virtual elements, at the intersection of local and global spheres defining these hyperdiverse communities. To effectively incorporate hyperdiversity into their designs, urban designers could start by understanding the current multiplicity of overlapping collectives through collecting community insights. Including collective creation approaches in design processes appears as a way to consider diversity as a productive difference.<sup>138</sup> Consequently, there is a shift in the sensitivity of an urban designer: turning towards a multiplicity of societal dimensions to produce more inclusive urban environments.

The plea to include collective approaches to re-create the 'city' as a collective resource parallels a particular Anglo-Saxon academic debate on urban planning. From one angle, Healey's voice resonates with Christine Boyer's fundamental critique on planning, which is always trying to escape from the meanness of the city's chaos, yet always generating veiled promises of technical utilitarianism. While diversity should be the designer's framework, current participative processes are limiting the scope, because they usually only involve limited key citizens and technical experts disconnected from the local community and culture. Such an approach does not serve all social groups and therefore does not represent its urban diversity. Thus, from another angle, Healey builds upon Dolores Hayden's understanding of cities as locales that collect people's 'my places'. Cities are assemblages of places where people hold memories. By eliminating the technocratic approach to planning, the design of public spaces can portray communities and shared memories, framing their ideas about their present and future.<sup>139</sup> In this manner, without intending to oversimplify Hayden's work, she calls for an engagement with diversity and for collaborative approaches in which experts coordinate without formalising procedures, like Boyer envisioned. Both approaches aim to optimise collective

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<sup>137</sup> Max Nathan, *The Economics of Super-diversity: Findings from British Cities, 2001–2006*, Discussion Paper 68 (London: SERC, 2011).

<sup>138</sup> Gilles Deleuze and Félix Guattari, *Mille plateaux: Capitalisme et Schizophrénie 2 (Collection Critique)* (Paris: Les Éditions de Minuit, 1980).

<sup>139</sup> Christine Boyer, *Dreaming the Rational City: The Myth of American City Planning* (Cambridge, MA: MIT Press, 1993), 282–90; Dolores Hayden, *The Power of Place: Urban Landscapes as Public History* (Cambridge, MA: MIT Press, 1995), 44, 227, 245–46.

resources for participatory, democratic governance.<sup>140</sup> In both, the emphasis on diverse values and perspectives affects entire organisational structures and challenges expert authority.<sup>141</sup> Yet, instead of reducing diversity to pre-organised public involvement, active engagement opportunities, and specific consultations or activities, the scientific challenge in urban design now revolves around expert judgment and knowledge, insight and skills within a diverse world.<sup>142</sup>

The shift in urban designers' sensitivity demands that they combine social factors with the usual variety of technological factors presupposed in urban design practice. The sensitivity shift complements the capacities that designers currently learn, centred on technical and expert knowledge, focused solely on scientific factors. With the increase of technological tools, especially making use of human-centric urban big data, as promised by smart cities and AI urban design, some believe that technology might be the answer to the explicit aspiration for inclusive design.<sup>143</sup> Enlarging the capacities of designers to engage with diversity and include others and otherness is not a mere technological action. It seems unlikely that digital policy and computer applications suddenly make urban designers engage better with citizens to understand and respond to diversity. What could make the difference is how they use digital tools together with their capacities. In the development of this article, the question explicitly emerging is what capacities designers should possess to combine – and sometimes even overrule – their disciplinary theorems with the situated non-expert knowledge of hyperdiverse communities.

Designers are never value-free agents, nor do they start designing tabula rasa, since from the start of their education, they develop normative preferences.<sup>144</sup> More often than not, designers have different ideas and values than the people for whom they design. In philosophy, the quality of being different defines the key to designing for diversity. As Gilles Deleuze put it in 1968, difference is productive, generative, and allows a sense of becoming, of fluid development that allows for change.<sup>145</sup> This immanence was embedded in a broader French school of thought at the time, advocating for a general shift towards radical, open democracy in both academia and

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<sup>140</sup> Patsy Healey, *Collaborative Planning: Shaping Places in Fragmented Societies* (London: Macmillan, 1997), 284, 288–94.

<sup>141</sup> Heather Campbell, 'Just Planning: The Art of Situated Ethical Judgment', *Journal of Planning, Education and Research* 26 (2006): 92–106.

<sup>142</sup> Ibid.

<sup>143</sup> Federico Cugurullo, *Frankenstein Urbanism: Eco, Smart and Autonomous Cities, Artificial Intelligence and the End of the City* (London: Routledge, 2021).

<sup>144</sup> Paulo Freire, *Pedagogy of the Oppressed* (New York: Continuum, 1970), 31.

<sup>145</sup> Gilles Deleuze, *Différence et répétition* (Paris: Presses Universitaires de France, 1968), 31.

society.<sup>146</sup> The notion of diversity within democracies began to fuel the discourse on the right to the city or *droit à la ville* as pronounced by Henri Lefebvre at the time, and it questioned the role of designers in democratic societies.<sup>147</sup> The notion of diversity also generated a notable search for richer relationships in cities, other than the sovereign relation between the people and public authorities and those relations traditionally empowered in urban life. With provocative concepts like *société autogestionnaire* or self-organising society as articulated by Jeannette Laot, experts, institutions and government were challenged to open up to other forms of living together, among others within the community.<sup>148</sup> Such pioneering yet episodic understanding of what is or should be a city seeded contemporary calls for universal access to inclusive public spaces as well as questions about designers' capacities to produce those. Inclusive public space is therefore not only a consequence of design, but should extend to designers themselves, their approaches and tools. Designing for diversity is a rhizomatic approach that is always in flux, never fixed, and it generates a multiplicity of possibilities and potentialities.

Everything in the rhizomatic realm of multiplicitous urban realities is interrelated. Since diversity is nourished by the principles of connection, heterogeneity, and continual (re)emergence, diversity itself can be understood as an in-between or unfinished estate.<sup>149</sup> Thus, design for diversity must acknowledge its unfinished nature and allow for novel connections to appear through open-ended processes. Conventional urban design approaches based on hierarchical disciplinary structures block such rhizomatic development through authority and therefore create multiple mismatches with the viewpoints of the local people. These mismatches derive from ideas that the hierarchy considers 'senseless' and thus refers to as 'stupid' ideas. Even with good intent, designing public spaces by applying textbook solutions covers situated multiplicity and therefore blocks the representation of local diversity in design. We call for incorporating in design the knowledge of the presumed 'idiots', private citizens, or laypeople – those with no professional design knowledge – to overcome experts' stupidity in answering today's main challenges in urban design. In designing for diversity, the idiot may be a commoner, a citizen without specific training or technical understanding of public space, or an amateur with an interest in urban matters. The knowledge of experts and idiots together can become a non-hierarchical, transdisciplinary assemblage of ideas that enhances productive difference to respond to hyperdiverse urban environments. Broadening the search

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<sup>146</sup> Michel Foucault et al., *C'est Demain la Veille: Entretiens avec l'Actuel Nova*. (Paris: Éditions du Seuil, 1973).

<sup>147</sup> Henri Lefebvre, 'Le droit à la ville', *L'Homme et la société* 6 (1967): 29–35.

<sup>148</sup> Jeannette Laot, *Stratégie pour les Femmes* (Paris: Les Éditions Stock, 1977), 79–80, 177, 214.

<sup>149</sup> Deleuze and Guattari, *Mille plateaux*, 9–16.

for collective intelligence to usually unheard voices and applying that knowledge in design could improve design processes and outcomes to better represent the multiplicity of and diversity within cities.

A comparative literature study of key authors introducing paradigmatic shifts for today's theoretical framing and understanding of collective creation, diversity and design ethics in public space elucidates how stupidity could benefit public space design for inclusion and diversity. We therefore conducted forensic examinations of the works introducing paradigmatic shifts, searching for indications of distinctive ideas and novel concepts as well as connections and influences among the writings of those authors. Special attention is given to the widespread concepts of participation, co-creation, co-design and placemaking.

## 3.2 Collective creation as collective problematisation

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The concepts of participation, co-creation, co-design and placemaking are mentioned in the same breath when talking about including citizens in urban design processes. While all these terms refer to approaches of collective engagement, it remains particularly important to differentiate between them. The notion of citizen participation refers to any level of involvement in a collective process. Sherry Arnstein's ladder of participation from 1969 establishes the levels of involvement in governance ranging from manipulation to citizen control.<sup>150</sup> In citizen-control situations, local people can govern from within the institution or defined hierarchy. Yet, important roadblocks towards inclusivity like racism, paternalism, power-holder resistance, and the ignorance and disorganisation of many low-income communities do not disappear.<sup>151</sup> Beyond participation levels, co-creation and co-design are notions that speak about collective creative processes, which – as argued below – are non-hierarchical in definition and institution. The difference between the notions is that co-creation is any act of collective creation, and co-design implies a continued collective effort between professional designers and

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<sup>150</sup> Arnstein, 'A Ladder of Citizen Participation'.

<sup>151</sup> Desmond M. Connor, 'A New Ladder of Citizen Participation', *National Civic Review* 77, no. 3 (May/June 1988): 249–57.

those who are non-trained designers.<sup>152</sup> Branching off participation, co-design emerged through what Alvin Toffler called 'a destiny to create'.<sup>153</sup> Since the Co-Design Society was formalised in 1979, co-design has become a manifest approach to engage citizens alternatively.<sup>154</sup> Co-design aims to design the future together, incorporating the needs of local people early in design processes to address variations in interpretations and the diversity of human value systems.<sup>155</sup> More recently, the notion of placemaking emerged out of a non-governmental pro-active expert initiative, Project for Public Spaces, which aimed at 'the enhancement of the community's image, both literally and figuratively'.<sup>156</sup> Design has been one of the essential elements of placemaking promotion, next to building leadership and working together, in terms of selling a public space as an existing place, and de-structuring economics.<sup>157</sup> Placemaking is 'a process that produces a new (or renewed) sense of place by connecting space with the communities that inhabit it'.<sup>158</sup> It happens, therefore, not necessarily through co-design, co-creation or participation, although often through collective action.

All these approaches to collective engagement in public space – co-creation, co-design and placemaking – help to problematise the existing situated knowledge and create a public collective. This kind of problematisation in design, following Deleuze again, involves the identification and exploration of problems without prescribing specific solutions.<sup>159</sup> Accordingly, problems are never fixed entities, but rather dynamic constructs that trigger thought and understanding in people, and problems give rise to multiplicity, as well as resulting from this, especially in hyperdiverse environments. As problems are productive and generative as well as manifold, problematisation becomes both the means and the ends of design, allowing for a creative engagement with physical, ethical and socio-spatial constraints and considerations. Problematisation thus becomes designing itself, by critically engaging with the limits shaping disciplinary theory and practice in an ethical

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<sup>152</sup> Sanders and Stappers, 'Co-Creation and the New Landscapes of Design'.

<sup>153</sup> Alvin Toffler, *The Third Wave* (New York: William Morrow and Company, 1980), 426, 457–58.

<sup>154</sup> Stanley King, Melinda Conley, Bill Latimer, and Drew Ferrari, *Co-Design: A Process of Design Participation* (New York: Van Nostrand Reinhold, 1989).

<sup>155</sup> H. Goeller, 'Mind that User's Mind: Incorporating Cultural Difference to User-Centred Design Approaches,' in *Collaborative Design: Proceedings of Co-Design 2000*, ed. Stephen A. R. Scrivener, Linden J. Ball and Andrée Woodcock (London: Springer, 2000), 17–26.

<sup>156</sup> Davies et al., *What Do People Do Downtown?: How to Look at Main Street Activity*.

<sup>157</sup> Ibid.

<sup>158</sup> Manzini and Coad, *Design, When Everybody Designs : An Introduction to Design for Social Innovation*.

<sup>159</sup> Deleuze, *Différence et répétition*.

act that enables a deeper exploration of complex societal issues.<sup>160</sup> Collective problematisation does not necessarily imply that design results are deemed ‘intelligent’, especially from disciplinary perspectives. Rather, using collective knowledge in public space design leads to a better understanding of the urban complexity present in hyperdiverse cities, which could eventually lead to design outcomes that interact better with local people and their realities.

Collective creation or co-creation seems to play a crucial role in problematising and conceptualising urban issues through empowering collective intelligence. Whereas designs as artefacts commonly have a well-defined design process, collective design processes follow changing steps, since they adapt to the citizens’ intentions and input. Co-creation acknowledges that design’s meaning and significance are added by society and relate to social or cultural differences. Yet, instead of searching for objectivity, collective creation also engages with subjectivity. Collective approaches in city-making presume an understanding in semiotic expression, language and meaning within cultures, as much as abilities to acquire community knowledge and capacities to learn and apply new context-situated techniques. Collectively proving and developing these relations, abilities and capacities builds the designer’s so-called *intelligence sociale* or social intelligence, as Bruno Latour pointed out in 1994.<sup>161</sup>

Critiquing design outcomes that claim intelligence, it is the actual capacities of the mind that hold the greatest importance in design processes. Pierre Levy’s notion of ‘collective’ intelligence came to the fore against the backdrop of the emerging internet as a more accurate term to embrace the existence of origin and authorship pluralities at the time. As digital information networks and interactive multimedia heralded change in the forms of communication and multiplied access to knowledge, people’s identities and social bonds quickly flourished.<sup>162</sup> This awareness started a quest for a new device in our ‘collective intellectual life’, as Latour would later call it, to support the search for matters of concern, as opposed to matters of fact. Today, still unfinished, this approach allows experts to engage ‘with more, not with less, with multiplication, not subtraction’, while it departs from narrow-minded disciplinary disapproval of ‘blind idiots’ not aware of social domination, or say, race, class, and

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<sup>160</sup> Gorny, ‘Reclaiming What Architecture Does’.

<sup>161</sup> Bruno Latour and Pierre Lemonnier, eds., *De la préhistoire aux missiles balistiques: L’intelligence sociale des techniques* (Paris: La Découverte, 1994), 11–24.

<sup>162</sup> Pierre Levy, *L’intelligence collective: pour une anthropologie du Cyberspace* (Paris: Éditions La Découverte, 1994).

gender within the discipline itself.<sup>163</sup> Instead of designing alternatives or options that focus on the elaboration and emanation from 'factual' contextual analyses of experts, design and creation should focus on the process of establishing collectives around matters of concern: common issues, interests and worries. Generally, design still revolves around matters of fact that are objective, scientifically established truths as opposed to collective intelligence, which focuses on matters of concern and is considered subjective input connected to stupidity and irrationality.

Still, as John Dewey already said in 1927, a single unified collective does not exist. There are only contrasting unions of distributive constituents and distributions of and within collectives.<sup>164</sup> The urban designer's role in creating inclusive public space requires a deeper understanding of the discrepancies between absolute truth and opinions subject to intermediaries and criticism. Dewey has been key to the further development of Latour's thought about a new, highly specialised kind of representation to accommodate greater diversity.<sup>165</sup> The discrepancies between truth and opinions and the difficulty of conceptualising a single collective should make urban designers aware that people *in situated* contexts relate to problems diversely and therefore to problematisation as well. As Jane Bennett states, 'problems give rise to publics' because people can affect and be affected by them.<sup>166</sup> Since designers are people too, they become part of the public and therefore part of the problem. Designers engaging with the collective can then affect the problem while also inevitably affecting themselves. Because they design for a shared problem, they cannot do problematisation from their desk. In co-creation processes, all actors sit around the same collective table dismantling hierarchical structures where viewpoints are equally validated, not equalised. The point of collective problematisation is not to agree but to agree to disagree. That is how a public appears. These processes can entail, for example, collectively sharing meaningful memories and experiences, collecting ideas or gathering visual references. Co-creation feeds the collective imagination of what people desire the city to be in a fair attempt to rethink intercultural cities.<sup>167</sup>

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<sup>163</sup> Bruno Latour, 'Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern' (Stanford Presidential lecture), *Critical Inquiry* 30 (Winter 2004): 225–48.

<sup>164</sup> John Dewey, *The Public and its Problems* (Denver: Alan Swallow, 1927).

<sup>165</sup> Bruno Latour, 'From Realpolitik to Dingpolitik, or How to Make Things Public', in *Making Things Public: Atmospheres of Democracy*, ed. Bruno Latour and Peter Weibel (Boston: The MIT Press, 2005), 14–45.

<sup>166</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010), 101

<sup>167</sup> Charles Landry, *The Creative City: A Toolkit for Urban Innovators* (London: Earthscan Publications, 2000), 185.

Nevertheless, co-creation has got some critique for also being a ruthless, even unscrupulous act of saving public expenditure by out-sourcing public services to well-meaning citizens.<sup>168</sup> This has become evident ever since the notion came into vogue in the 1980s.<sup>169</sup> Opponents hold that co-creation could dismiss urban designers from their jobs, and exempt the government from its responsibilities, thus leaving cities without the appropriate technical expertise to oversee both design and public administrative accountability. In this article, we see co-creation as an enlargement of the designer's responsibility towards citizens, communities, cultures and the city to collectively constitute both a public and a common ground.

Incorporating hyperdiversity in design through sources considered stupid defies urban designer's capacities. In an obsolete way of thinking, these capacities assemble around aesthetical, technological and administrative capacities. Designing inclusive public space demands diverse capacities, because to include diversity one must first acknowledge its existence and that one is part of it. For example, if a designer wants to include the perspective of children in the design, they must learn to interpret the tacit layers from a naive drawing of a house, street or playground. Such positioning asks for unusual ways of looking, to see something productive for design where there seems to be only absurdity. Designers of inclusive public spaces embracing 'idiots' and laypersons' viewpoints can help mediate between design expression and public space sociability. The multiple viewpoints and problems inherent to hyperdiversity are pushing urban designers not merely to open to all and everything in the city, but rather to design for diversity, through identifying provisional identities, mapping viewpoints, experiences, values and imaginations. Eventually, in the search for collective intelligence, designers will have to enter processes of subjectification, of rebuilding social relations at every level of the *socius*, and of accepting the open spectrum between natural and artefactual worlds. It's a major turn towards 'new collective modes of expression and challenging forms of sociability', as design theorist H  l  ne Frichot describes it.<sup>170</sup> Not only do such co-creative processes in public space maintain the designer's agency, they also endow them with the task to design aesthetically and ethically.<sup>171</sup> She combines Latour' relational approach with the ethico-aesthetic concept encompassing a sensitivity

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<sup>168</sup> Richard Normann and Rafael Ramirez, *Designing Interactive Strategy: From Value Chain to Value Constellation* (Chichester: John Wiley & Sons, 1998), 141–44.

<sup>169</sup> Richard Sundeen, 'Explaining Participation in Co-Production: A Study of Volunteers', *Social Science Quarterly* 69, no. 3 (1988): 547–68.

<sup>170</sup> H  l  ne Frichot, 'Foaming Relations: The Ethico-Aesthetics of Relationality', in *Occupation: Negotiations With Constructed Space, Conference Held at the University of Brighton*, CD-ROM Brighton, 2009), 35–38.

<sup>171</sup> F  lix Guattari, *Chaosmose* (Paris: Editions Galilee, 1992).

toward the mental, social and environmental ecologies in which designers act, as Félix Guattari presented it.<sup>172</sup>

One way in which ethico-aesthetics have translated into urban design practice is through the notion of commoning or of common space. In this, public space is the common ground of collective negotiation; it is seen as the ultimate ground for the commons or commoning, since it appears as the clash between the private and the public, individual and collective interests.<sup>173</sup> The commons model challenges the dichotomy of public-private and makes space for citizens to engage in collective action through self-governance, empowerment and self-determination.<sup>174</sup> Commoning in public spaces inevitably implies collective problematisation. Defining the common goods and public values at stake is how a collective or ecology becomes a commoning actor and actant. Commoning sees 'urban enclaves not as closed, rigid spaces, but rather as thresholds of negotiation, ... that uncover the potential of constant transformation via the formulation of porous borders of inclusion.'<sup>175</sup> Commoning is an act of collective problematisation turned by designers into an ethico-aesthetic practice. Over the last decades, different forms and degrees of commoning as a co-creation practice have appeared in urban design. More recently, placemaking has inherited the tradition of participatory practices, absorbed practices of commoning and made it into a global success.<sup>176</sup> However, the avid production of knowledge around these topics shows that there is still a big gap between theories closely related to participation, co-creation, co-design and placemaking and how to design for diversity in public space. As Gerhard Bruyns and Stavros Kousoulas put it, 'the question and theorisation of shared (collective and technological) capacities will remain part and parcel to the future of design thinking and doing.'<sup>177</sup> In what follows, we aim to expand designers' capacities for the broad range of collective approaches to designing inclusive public spaces.

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<sup>172</sup> Guattari, *The Three Ecologies*.

<sup>173</sup> Bruyns and Kousoulas, 'An Introduction to Design Commons', 5.

<sup>174</sup> Sohn et al., 'Introduction'. Heidi Sohn, Stavros Kousoulas and Gerhard Bruyns, 'Introduction: Commoning as Differentiated Publicness', *Footprint* 9, no. 16 (2015): 1–8

<sup>175</sup> Sohn et al., 'Introduction', 5.

<sup>176</sup> Keidar et al., 'Progress in Placemaking', 2.

<sup>177</sup> Bruyns and Kousoulas, 'An Introduction to Design Commons', 7.

### 3.3 On the designer's capacities to design for diverse public spaces

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The shifts in urban design presented above – including the social and technological turns– come together in the co-design of inclusive public spaces that contribute to personal, social and human equality, by including all actors and actants. Co-designing inclusive public spaces challenges the traditional capacities of modern designers who focus on scientific knowledge and give preference to 'smart' and 'expert' ideas over 'stupid' and 'amateur' ones. For this reason, in this article, we make a plea for collective stupidity, not as the opposite to collective intelligence but as complementary to it. Smart or expert knowledge is usually related to technical capacities that may relate to specific disciplines. By contrast, the challenge of designing public space for diversity demands a set of capacities that surpasses such disciplinary divisions and touches upon intrinsic human capacities to engage with one another. Cities may be best understood as highly relational environments of interconnected actors and actants and, drawing on Foucault's work in this regard, habitats of material-discursive practices.<sup>178</sup> In our view, practices of co-creation, co-design and placemaking actually intend to favourably connect amateurs and experts with collective stupidity, and even idiocy.

Specific designer capacities –distinguishable from but connected to traditional designer capacities– can help to (re)connect to the diversity of citizens, communities and cultures in a situated context. The inclusive design of public spaces starts with communication as the capacity to discuss and unfold dialogue in order to exchange values, ideas, perspectives and expertise, as well as discuss the physical-material attributes of a diversified public life. To navigate hyperdiversity, designers may rely on diversity studies that focus on socio-economic, social, cultural and ethnic differences to understand personal, social and human differences. Understanding diversity can help design for inclusion through equality regardless of gender, age, heritage, income, lifestyle, behaviour or activities.

Especially when public space is not created but re-created or re-purposed, before intervening, inclusive design approaches must understand and foster relations between human and nonhuman actors, as Bruno Latour would call them.<sup>179</sup>

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<sup>178</sup> Gorny, 'Reclaiming What Architecture Does', 192. ; Wanda J. Orlikowski and Susan V. Scott, 'Exploring Material-Discursive Practices,' *Journal of Management Studies* 52, no. 5 (2015): 697–705.

<sup>179</sup> Latour, *Reassembling the Social*.

Designs, designers, the people for and with whom they design, and all design concepts and underlying values are interconnected actors or actants in dynamic networks. All these layers come together in Guattari's three ecologies: mental ecologies, social ecologies and environmental ecologies.<sup>180</sup> In the context of inclusive public space design, the mental ecology refers to the diversity of citizens, the social ecology to the diversity of communities, and the environmental ecology to cultural diversity. As Elizabeth Sanders, one of the pioneering advocates of co-design already said in the early days of the concept, the expert mindset of designers needs to change to an egalitarian mindset.<sup>181</sup> To make this change, urban designers need to be able to incorporate affects that are 'embodied and embedded, relational and affective', as Rosi Braidotti calls it; designers must enlarge their capacities, agencies, and technologies.<sup>182</sup> In her post-humanistic approach Braidotti sees the lines separating humans from nonhuman actors as less apparent, and thus calls for converging viewpoints beyond the human-centric: 'a "we-are-(all)-in-this-together-but-we-are-not-one-and-the-same" kind of subject'.<sup>183</sup> Looking for the common 'matters of concern' and including affects often considered irrelevant, personal, irrational, or bluntly stupid could support the design of public spaces that better contribute to our urban living environments.

Still, the actual practice of collectively creating inclusive public space is often hindered by the lack of concrete and explicit design approaches. Below, we explore some possible capacities that designers could incorporate to increase their agency, by expanding on Isabelle Doucet and H  l  ne Frichot's call for situated, relational and embodied perspectives.<sup>184</sup> We argue that to contribute to more inclusive public spaces consequently, designers need to develop the capacities of situated and cultural awareness, sensitivity to individual and community experience, and designing with the tacit.

Primarily, designing for inclusive public spaces is situated in a specific context and time. Urban designers need to be aware of the situated context in which they work. Donna Haraway's notion of 'situatedness', key to Braidotti's reasoning too, enables understanding diversity without being bound to a fixed geographical location or position.<sup>185</sup> It can be situational in societal sense too. A situationally relativistic

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<sup>180</sup> Guattari, *The Three Ecologies*.

<sup>181</sup> Sanders and Stappers, 'Co-Creation', 5–18.

<sup>182</sup> Gorny, 'Reclaiming What Architecture Does'.

<sup>183</sup> Braidotti, 'Posthuman Critical Theory', 14.

<sup>184</sup> Doucet and Frichot, 'Resist, Reclaim, Speculate', 1.

<sup>185</sup> Donna Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective', *Feminist Studies* 14, no. 3 (Autumn, 1988): 575–99.

attitude and thus a capacity to contextualise any social group or cultural practice as such helps urban designers to co-design inclusive public spaces. Maps, for example, may document people's movements across public spaces over time as citizens engage with physical surroundings, other individuals and groups, and other actants. Mapping is then a method that serves the understanding of dialogic actor-actant relations. In these ways, designers will recognise that urban design is not created in isolation. By employing a socioculturally situated lens, public space designers can merge insights from design, the social sciences and the humanities with technical parameters. Setha Low introduced such a merged and operational approach to public space design in the spatialised employment of ethnography. Also building upon the notion of situatedness, such embedded approaches merge spatial and social relations through which designers can prioritise a fluid concept of culture.<sup>186</sup> Equally, designers could contribute to the calls in the social sciences for an ethnographic practice more committed to social justice goals.<sup>187</sup>

Second, designing for inclusive public space involves understanding the unique experiences of the socio-spatial relations *in situated* communities. In addition to the capacities mentioned above, designers must be affective as well, hence attuned to the needs of individuals and communities, as well as mindful of the social-spatial situation of neighbourhoods. Yet, because spatial experience is embedded and embodied, people 'cannot live other people's lives, and it is a piece of bad faith to try', as anthropologist Clifford Geertz already concluded in the 1980s. What designers can do is 'listen to what, in words, in images, in actions they say about their lives.'<sup>188</sup> Developing such conscious listening skills enhances the designer's capacity to understand the needs and perspectives of those for whom they design. Methods such as narrative enquiry, directed dialogues and storytelling can reveal valuable individual and collective experiences and views in public spaces within the cities. For Shelley Evenson, listening to individual and community stories in such experience research can reveal consistent patterns in people's collective knowledge to inform and validate co-design.<sup>189</sup> As a mnemonic device, storytelling approaches

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<sup>186</sup> Setha Low, *Spatializing Culture: The Ethnography of Space and Place* (London: Routledge, 2017); Setha Low, 'Embodied Space(s): Anthropological Theories of Body, Space, and Culture', *Space and Culture* 6, no. 1 (2003).

<sup>187</sup> Setha Low, 'Claiming Space for Engaged Anthropology: Spatial Inequality and Social Exclusion', *American Anthropologist* 113, no. 3 (2011): 389–407; Setha Low and Sally Merry, 'Engaged Anthropology: Diversity and Dilemmas', *Current Anthropology* 51, no. 2 (2010): 203–26.

<sup>188</sup> Clifford Geertz, 'Making Experiences, Authoring Selves', in *The Anthropology of Experience*, ed. Victor W. Turner and Edward M. Bruner (Urbana: University of Illinois Press, 1986).

<sup>189</sup> Shelley Evenson, 'Directed Storytelling: Interpreting Experience For Design', in *Design Studies: Theory and Research in Graphic Design*, ed. Audrey Bennett (New York: Princeton Architectural Press, 2006).

help to explore obstacles to the inclusion of certain communities and sum up diverse expectations for the neighbourhood, which may help to envision alternative futures and design for it together. As Dolores Hayden underlines, these approaches do not only transform traditional roles but also advance interdisciplinary work.<sup>190</sup>

Third, the latter capacity involves an essential human capacity which designers should aspire to cultivate, namely empathy. Designing for inclusive public space must involve all kinds of citizens. In line with Healey's premise that empathetic understanding is essential to re-create the city as a collective resource, urban designers must embrace the diversity in personal experiences and values.<sup>191</sup> The ability to take on another's perspective, to understand, feel and possibly share and respond to their experience is crucial in the co-creation of inclusive public space. Being empathetic to personal thoughts, emotions, bodily expressions and inner beliefs fosters a deeper understanding and connection to the stories, the people and the place. Inspired by Haraway's positioning, María Puig de la Bellacasa speculates on a broader ethics of care in its transformative, non-innocent, disruptive ways. Although not built on the notion of public space, but rather of 'soil', she underlines the use of 'care' to tackle the dominance of technoscientific future-oriented thinking by recognising (temporal) diversity at all levels.<sup>192</sup> Ecological care is a radical turn away from the anthropocentric perspectives that envision design as an object, thing, entity, relatum, or physical imprint of a design ideology. Instead, care ethics underpins the idea that design can only be inclusive through its performative metaphysics. This approach fosters a continuous flow of agency through design, allowing the human act of worlding through design to present itself in diverse ways to others. The process is ongoing and open-ended, constantly evolving into both stable and unstable forms.<sup>193</sup> Assuming that co-creation, co-design, and even placemaking are essentially acts of sympoiesis, where actors and actants are themselves also collectively being co-transformed by 'becoming-different-together'.<sup>194</sup> Therefore, designing inclusive public space involves an ongoing reshaping of design dynamics where there is no one-size-fits-all approach. Instead, an inclusive approach demands that designers have the capacity to be flexible, adaptive and capable of anticipating and responding to evolving needs and continuous change.

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<sup>190</sup> Dolores Hayden, *The Power of Place: Urban Landscapes as Public History* (Cambridge, MA: MIT Press, 1995), xiv, 46–47, 228–29.

<sup>191</sup> Healey, *Collaborative Planning*, 284

<sup>192</sup> Puig de la Bellacasa, *Matters of Care*, 169–70.

<sup>193</sup> Karen Barad, 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter,' *Signs* 28, no. 3 (Spring 2003): 801–31.

<sup>194</sup> Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016), 58.

Last, designers need to be able to turn the insights gathered in collective creation about the context, community and citizens into signs and significances. According to Low, community interactions in specific cultural contexts help embed global and local power relations into physical space. The situated and embodied spatial negotiation of these relations is what gives meaning to that space. Design language and semiotics together with material and metaphorical expressions in design can transform a physical space into a place with meaning. If design is not developed with the community, disputes about furnishings, use and ambience could turn into an openly visible platform for expressing cultural conflict, community change and even citizen exclusion.<sup>195</sup> In parallel, the perception of design has shifted from purely focusing on semiotics towards an interest in the tacit. There is a 'growing awareness that abilities and unstated habits and assumptions are equally formative for our intellectual understanding as the more formal, codified things we learn', as architecture theorist Lara Schrijver has observed.<sup>196</sup> Tacit knowledge, or the unspoken or implicit understanding, skills and assumptions that people possess but may not be able to articulate, explicitly remains the biggest challenge in the coding and decoding processes of design. If design is a process of coding and decoding that is self-referential, where signs and meanings are repeated within a specific networked group of designers until they are pronounced as truths, designing for diversity means not taking the usual as the norm.<sup>197</sup> Urban designers have to deeply explore the specific tacit embodiments in the situated environments where they intervene. Ultimately, design intends to create material arrangements.<sup>198</sup> Designing for diversity then consists of collectively decoding the context and community to eventually code it back into material arrangements holding relevant significance for all citizens. Yet, any material arrangement is temporal because society, and therefore its diversity, is dynamic by nature, and so is space. This extends Karen Barad's claim that embodiment is not a matter of 'being of specifically situated in the world, but rather being of the world in its dynamic specificity'.<sup>199</sup> As being able to translate the tacit may be the ultimate capacity in designing for inclusive public space, it assumes that the designer has understood the context, the community and the citizens, has gathered insights, and can recode them into material arrangements such as co-creation activities like workshops or spatial design interventions. Parting from the conventional basics of design practice and education that usually revolve around

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<sup>195</sup> Setha M. Low, 'Toward an Anthropological Theory of Space and Place,' *Semiotica* 175 (June 2009): 21–37.

<sup>196</sup> Schrijver, *The Tacit Dimension*, 7.

<sup>197</sup> Maurice Hartevelde, 'Interior Public Space: On the Mazes in the Network of an Urbanist' (doctoral diss., TU Delft, 2014), 502–45.

<sup>198</sup> Gorny, 'Reclaiming What Architecture Does'.

<sup>199</sup> Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007), 376–77.

working with data, references and physical objectivity, working with tacit knowledge necessitates unique design tools tailored to each process. This entails a sense of design agency, or what Haraway calls response-ability.<sup>200</sup> From a designer's viewpoint, an ability to recognise interconnectedness, acknowledge ethical responsibilities, value diverse forms of knowledge, build coalitions, and take action to address pressing issues in our world defines the pathway to designing for diversity.

### 3.4 Success and failure: two sides of the ethico-aesthetic approach

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With an eye on current practice, with or without these capacities, how can urban designers successfully distance their modus operandi from the focus on smart and successful solutions? Perhaps they can not. If designers embrace collective stupidity for more inclusive public space design, they will have to make their peace with failure too. Far from being an unfortunate result of design, failure is a critical component behind the proposed shift.<sup>201</sup> Through collective creation for diversity and inclusion, public space design emerges only through daring to fail and learn from other design failures. In this, every actor involved can learn from failures through reflection on problematisation and on alternative ways of operating. It could even be argued that the biggest failure for a collective creation process is to succeed without struggle, since that would hinder the impact of the collective transformation in material and immaterial terms. Success may be to failure what intelligence is to stupidity. If one were considered good and productive, the other one would be bad and useless. Introducing more stupidity in urban design would unavoidably include more (apparent) failure, more discomfort, more challenges. It is up to the designer's skills to make those consequences generative for co-creation and in co-design.

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<sup>200</sup> Haraway, *Staying with the Trouble*, 65.

<sup>201</sup> Henry Petroski, *Success through Failure: The Paradox of Design* (Princeton, New Jersey: Princeton University Press, 2018).

Although collective creation approaches for diversity are not yet generalised in urban design practice, there are examples of alternative design practices exploring these approaches and capacities across Europe. Far from staying within theory, Atelier d'Architecture Autogérée (AAA, Paris) designs with a participative approach which enhances diversity and inclusion. Their dedicated situated and multicultural approach unites with citizen science while they provide environmental education. This is seen in their R-Lab public space project in Paris as well as in the WikiLab project in Saint-Denis. Their approach revolves around participation and includes participatory mapping and the mapping of sharing practices as well as experimentation with methods of self-management and co-construction.<sup>202</sup> Similarly, Raumlabor (Berlin) designs through participation, with the aim to create mutuality among diverse groups and initiate common engagement with public spaces. They introduce embedded experiences into design. Participants in their design of the Mathildenhöhe public space in Darmstadt investigated chances to live and experience the appropriation of a space through varying levels of experience: inviting sixty participants to settle there for three weeks. Taking a slightly different turn in their design for Floating University in Berlin, they extend their targets to a more-than-human approach. Beyond being recognised by disciplinary awards and being embraced by community and critics, the project led 'to that community being three times larger than it used to be'.<sup>203</sup> The work of Recetas Urbanas (Seville) displays familiar situated approaches to public space design, which provoke self-managed cities as well. They co-create temporary spaces with communities by incorporating their experiential knowledge and with an aim to unite those communities too. Although experiences had been developed over time and before the project started, Recetas Urbana's public space intervention in the Baldomer Solà school in Badalona near Barcelona may serve as an example. It anticipates in collective judgement of the neighbourhood and the communities' needs. The particular needs of each actor, including the designer, are made compatible with the needs of others, which implies an exercise in empathy and tolerance. In addition, by demonstrating positive attitudes towards their alternative approach, citizens make their projects visible and

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<sup>202</sup> Doina Petrescu et al., 'Sharing and Space-Commoning Knowledge through Urban Living Labs across Different European Cities', *Urban Planning* 7, no. 3 (2022): 254–73; Cyrille Hanappe, Beatrice Mariolle and Cristiana Mazzoni, *Ecologie riveraine: la Seine-Saint-Denis à horizon 2030* (Paris: Éditeur La Commune, 2024); AAA website, <https://www.urbantactics.org/projets>.

<sup>203</sup> Jan Liesegang, Markus Bader, Julia Klauer and Suzanne Labourie, *Building the City Together* (Berlin: ZK/U press, 2015); Louis Volont, 'Is Common Space Politically Potent? A Reflection on Raumlabor's Aesthetic Gesture', *Forum+* 28, no. 1 (2021): 12–19; George Kafka, 'Floating University in Berlin, Germany by Raumlabor', *The Architectural Review*, 26 September 2022, <https://www.architectural-review.com/buildings/floating-university-in-berlin-germany-by-raumlabor/>; Raumlabor website, <https://raumlabor.net/partitatives-bauen>.

share experiences with other communities.<sup>204</sup> These practices lead to different and often surprising ideas on the concrete spaces and helps to identify topics that affect people's environment. Still, it remains unclear whether such co-created practices will be absorbed by established 'success' practices or whether such approaches will become popular and eventually common practice.

### 3.5 Navigating diversity: recommendations for designing inclusive public spaces

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Designing public spaces for inclusion in today's hyperdiverse urban environments demands a design approach that integrates ethical considerations, aesthetic sensibilities and collective intelligence, which often entails dealing with the apparent stupidity of non-experts or other disciplines. To address this challenge effectively, it is recommended that urban designers first acknowledge their own stupidity and prioritise collective intelligence in the design processes to overcome it. This involves actively engaging with diverse local actors – including experts as well as 'idiots' – to contribute to designing inclusive public spaces through a process of shared problematisation. To do so, designers need to enlarge their practices, and thus their capacities towards an ethico-aesthetic approach or relational practice with complementary capacities. We found these capacities to be situated and cultural awareness, sensitivity to individual and community experience, and designing with the tacit. By fostering collaborative efforts, discussion and dialogue, designers can create public spaces that better reflect the needs and values of the people they serve. The illustrative cases of situated practices that focus on collective creation to create inclusive public space show potential to change the modus operandi of urban design with community values at heart. Such approaches show that incorporating diversity in design by embracing idiocy and failure in commoning practices can facilitate the designer's contribution to meaningful social interactions and foster a sense of ownership and stewardship among cultures, communities and citizens, eventually improving urban living environments.

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<sup>204</sup> Santiago Cirugeda, *Situaciones Urbanas* (Barcelona: Tenov, 2007); Marina Arespacochaga Maroto, *Autoconstrucción, La Escuela Crece en la Biennale di Venezia (A Self Construction Project / Progetto di Autoconstruzione / Projet d'Autoconstruction)* no. 1 (May 2016), [https://theshowroom.org/media/pages/events/recetas-urbanas-data-sheets/0dede30ec4-1695373354/the\\_school\\_grows\\_\\_madrid.pdf](https://theshowroom.org/media/pages/events/recetas-urbanas-data-sheets/0dede30ec4-1695373354/the_school_grows__madrid.pdf); Recetas Urbanas website, <https://recetasurbanas.net/espacio-publico>.

However idyllic an inclusive approach based on relational design capacities seems, such practice deeply challenges two main points of design education and practice: authorship and beauty. Designing as another actant of ecologies without hierarchical power may take away design's self-imposed responsibility for socio-spatial beauty. When design focuses on process over product, on values over composition rules, the recognition of styles, schools and geniuses might become challenging. In the inclusivity turn, beauty and authorship have retreated in favour of collectivity and impact. Perhaps, in this new paradigm of relational, affective and diverse design, design education, design practice, and even design research may embrace humility, selflessness, modesty or even anonymity for the common good.

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# 4 Makerspaces in Public Libraries

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## Activating Publicness through a Co-created and Multiscalar Design Approach

The current chapter presents the research results from the MAKERLAB Project coordinated by the National Library of the Netherlands between 2021-23 and sponsored by Stichting PICA for the advancement of Public Libraires in the Netherlands.

This chapter explores how the design of makerspaces in public libraries can foster public engagement and reflect evolving cultural values in late modernity. Drawing from the MAKERLAB project in the Netherlands (2021-2023), it presents public libraries as dynamic thresholds where citizens transition between private and public life. Through a design-driven research approach using co-creation, eight pilot libraries collaboratively developed programming and spatial strategies to implement makerspaces tailored to their communities. Makerspaces are aimed at promoting learning especially among underrepresented groups. The research emphasises that, beyond objects or programming, spatial design is central to adaptive reuse and publicness activation. Makerspaces are conceptualised not just as spaces, but as liminal environments for the shared making of objects and meanings. The study provides multiscalar design approaches through spatial strategies, functional layouts and spatial elements contributing to broader debates on the future of the public library and the adaptive reuse of public interiors at large.

- # Publicness
- # Makerspaces
- # Co-creation
- # Design Driven Research
- # Library
- # Adaptive Reuse

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On that gloomy morning, the square of the shopping mall was still empty, before cars of shoppers swarmed toward the well-known “de Heeren van Rinsma” clothing shop.

At the corner of Schansburg and Hofland streets, there was a curious element. One could say it was an artwork: the contours of the fortified city of Gorredijk were represented on the ground and in a physical model.

Across from it, a red brick building stood, unremarkably looking out onto the square. Two words exposed it: Bibliotheek and Ingang, the latter hanging above a metal portal.

As it often happens, once I entered the building, the atmosphere changed drastically. The interior was carefully designed and quite lively.

By observing others, I began to recognise what one could do in that space. Some sat reading the newspaper, others looked for books with their grandchildren, others—like me—ended up there without knowing too well what they were doing.

Suddenly, my phone rang. During the conversation, the man sitting across from me asked me to be silent; after all, we were in a library. Little did he know that libraries are not the reflective, silent spaces they once were.

Cutting through the reading room, a group of teenagers decisively walked toward the back, to the makerspace, where, among the tools, there was a coffee machine with free coffee for everyone. Offering coffee as a way of saying, “You are welcome; you belong here.”

Let’s get ready to make something together. But first, coffee!

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FIG. 4.1 The makerspace in Gorredijk's library aspired to become a safe haven for visitors of all kinds. On the one side, machinery and tools; on the other side, a coffee corner that act as a symbiotic pair to attract visitors to engage.

## 4.1 Libraries as Evolving Infrastructures for Collective Transformation

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### 4.1.1 Background. Cultural buildings in Late Modernity

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In the late modern context of increasing liquidity, the boundaries between the public and private realms have become blurry.<sup>205</sup> Influenced by technology, digital tools and social media, the liquid public sphere can quickly flood or retreat into any existing space<sup>206</sup>. What now is an office space could become a gallery in some hours. Therefore, any space permanently or temporarily engaged in the public sphere can become a public space. In this context of continuous transformation, public space also reciprocally adapts to society's transforming cultural values. Public space responds dynamically to fixed spatial and typological categorizations, to the changing nature of urban public life, and to the intertwined physical and digital lives.

Public space's liquification also challenges the definition of public buildings because of the symbiotic relation between the two. Public buildings are containers of public space because they accommodate indoor public life.<sup>207</sup> They have been traditionally conceptualised in binary perspectives: public-private, indoor-outdoor, accessible-restricted.<sup>208</sup> Nevertheless, today, the fluidity of social, political and economic structures deems such conceptualization dated.<sup>209</sup> Among public buildings, cultural buildings are the ones that actively embody cultural values.<sup>210</sup> Because they materialise collective values, they are particularly sensitive to societal change. The challenge, then, is how to design cultural buildings that can adapt to the ever changing cultural values of late modernity, shifting the focus away from how architecture *represents* culture toward how buildings and spaces can accommodate the changing values and emerging practices for evolving publics, over time.

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<sup>205</sup> Bauman, *Liquid Modernity*; Madanipour, *Public and Private Spaces of the City*.

<sup>206</sup> Jachna, *The Affordances of Digital Technologies in Public Space*.

<sup>207</sup> Madanipour, *Public and Private Spaces of the City*, 109.

<sup>208</sup> Harteveld, *Interior Public Space: On the Mazes in the Network of an Urbanist*.

<sup>209</sup> Sorkin, *What Goes Up*, 73–78; Langstraat and Van Melik, 'Challenging the "End of Public Space"'

<sup>210</sup> Mommaas, 'Cultural Clusters and the Post-Industrial City'; Siláči and Vitková, 'Public Spaces as the Reflection of Society and Its Culture'; Mehta, *Public Space*.

— **Which design approaches can effectively activate publicness across scales in existing public interiors?**

Furthermore, in recent Late Modernity, architectural practice's success has been defined by the amount and impact of its cultural building's designs. Design firms produced cultural buildings as global sculptures of late modernity<sup>211</sup>. These cultural buildings were developed to support economic growth through urban rebranding, regenerating urban areas or increasing tourism while often neglecting public values and producing long-term unwanted consequences such as gentrification or touristification<sup>212</sup>. To avoid such undesired effects and to ensure positive impact on the public sphere, cultural buildings are exploring other design and operation approaches that focus on the community and environment and treat buildings as open-ended processes instead of finished objects.<sup>213</sup>

Public buildings are the physical structures containing public space for common use. Public buildings like libraries are designed as static long-lasting finished structures to last decades or centuries while –in late modernity– the cultural values hosted by public buildings transform at a much higher speed in reciprocity with society. There is therefore a challenge for architects to design public buildings that can adapt to the reflexivity and liquidity of late modernities' cultural values.

An approach to this is to conceive public buildings as unfinished, dynamic and relational publicness processes instead of finished products, supported by the notion of public thresholds.<sup>214</sup> A threshold is “a point [...] above which something is true or will take place and below which it is not or will not”.<sup>215</sup> In public buildings, the thresholds is defined by the point or limen when citizens engage in public life. Establishing a parallel with spherology, engaging in public life is when private bubbles or citizens temporarily become foam, later disintegrating into individual bubbles.<sup>216</sup> Public thresholds embrace these processes of publicness as dynamic and emergent.

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<sup>211</sup> King, *Spaces of Global Cultures : Architecture, Urbanism, Identity*.

<sup>212</sup> Grodach, 'Museums as Urban Catalysts'.

<sup>213</sup> Till, *Architecture Depends*.

<sup>214</sup> For a theoretical grounding of publicness, thresholds and liminality, see Chapter 1.

<sup>215</sup> *Merriam-Webster.Com*, 'Threshold'.

<sup>216</sup> Palese, 'Zygmunt Bauman. Individual and Society in the Liquid Modernity'.

In the case of libraries, conceiving them as dynamic thresholds of publicness could make room for new, transforming, and diversifying cultural values, like qualitative proper education, gender equality, or designing safe, resilient and inclusive places in sustainable cities. If designed considering their role in the public sphere, libraries as public buildings could serve as a powerful tool to strengthen cultural values by providing a common space for civic connections and social interaction.

#### 4.1.2 The Transition of the Modern Library

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Public libraries emerged in Modernity as instruments of enlightenment, promoting democracy, empowerment, and social mobility through literacy and rational thought.<sup>217</sup> Libraries were both agents of change and social stabilisers, improving conditions for citizens through self-actualization while also acting as a form of surveillance and inner disciplining. In the transition to late modernity, libraries acted both as outcomes of and contributors to the reflexive process: libraries transformed themselves and supported citizen's transformation too. As society transitioned to late modernity, libraries embraced the increased reflexivity, cultural diversity, and dedifferentiation, to support the individual's development.<sup>218</sup> From the 1960s onwards, libraries have evolved from purely enlightenment-focused institutions to multifunctional entities beyond books that also include diverse media and functions such as cultural centres and community hubs. This diversification aligns with the broader postmodern shift from universal truths to valuing diversity and supporting cultural changes. In a way, libraries have become reflexive tools, responding to the complexities and uncertainties of contemporary society by facilitating community engagement, life-long learning, and supporting citizen empowerment through embracing diversity.

Libraries remain one of the few free social infrastructure spaces supporting community life in late modern cities.<sup>219</sup> Social infrastructures such as libraries determines the possibilities citizens have for social connection, community building and civic participation. Libraries are key infrastructures because they support civic society by allowing diverse citizens to engage in social practices around knowledge. As Hannah Arendt put it, public space is constituted by practices and artefacts.

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<sup>217</sup> Hvenegaard Rasmussen and Jochumsen, 'Problems and Possibilities', 46.

<sup>218</sup> Hvenegaard Rasmussen and Jochumsen, 'Problems and Possibilities'.

<sup>219</sup> Klinenberg, *Palaces for the People*.

It is at the combination of these two that social practices and public interactions emerge through public artefacts, bodies, symbols, and media.<sup>220</sup> Therefore, the design of public space design centring publicness and social practices can have positive effect in the formation of cultural values around libraries.

In recent decades, libraries have shifted from mere book repositories of books to dynamic community spaces that foster cultural and social connections.<sup>221</sup> In European and North American contexts, libraries have undergone a performative turn characterised by a new relation between the library and its users where the latter holds more agency.<sup>222</sup> Libraries have shifted from knowledge consumption to knowledge production spaces.<sup>223</sup> Such shift has crystallised in some contexts in the introduction of makerspaces in libraries as common spaces for creation and innovation.<sup>224</sup> Library makerspaces are dedicated spaces within a library where citizens can engage in activities for innovation and learning in a collaborative and supportive environment to explore new skills, engage in creative projects, and share knowledge.<sup>225</sup>

The integration of makerspaces into public libraries reflects broader societal shifts towards participatory culture and the democratization of knowledge. Making appears as a novel way of developing knowledge through action and to expand traditional literacy. In an era characterised by individualization and self-actualization, makerspaces serve as communal spaces for collective learning and collaboration. Beyond serving as mere workshops, makerspaces support cultural value creation and transformation. With an emphasis on firsthand learning, creativity, and innovation, makerspaces represent a departure from traditional library programming. These spaces provide citizens with access to tools, resources, and expertise to engage in a wide array of making activities, ranging from 3D printing to electronics or cooking. By providing opportunities for direct experimentation and skill development, makerspaces empower individuals to actively shape their cultural environment and contribute to the co-creation of knowledge (Fig. 4.2).

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<sup>220</sup> Schmidt and Volbers, 'Siting Praxeology. The Methodological Significance of "Public" in Theories of Social Practices'.

<sup>221</sup> Koen and Lesneski, *Library Design for the 21<sup>st</sup> Century*.

<sup>222</sup> Jochumsen et al., 'Towards Culture 3.0—Performative Space in the Public Library'.

<sup>223</sup> Caso, 'Public Libraries and "Making." Experiences in the Netherlands'.

<sup>224</sup> Jochumsen et al., 'Towards Culture 3.0—Performative Space in the Public Library'.

<sup>225</sup> Willingham and Boer, *Makerspaces in Libraries*.

In the fluid milieu of late modernity makerspaces offer a dynamic entry point into the public sphere. Central to the concept of library makerspaces is their role as public thresholds, transcending conventional distinctions between public and private realms. Citizens cross physical and mental boundaries and undergo a transformation, what is called a liminal transition. Library makerspaces support citizen's passage through cultural practices between two states of being, between their private self and public self, their old and new self. Liminality is a rite of passage characterised by a sense of ambiguity and transition, following van Gennep's liminality.<sup>226</sup> Library makerspaces create space for a *communitas* for new forms of social organization and interactions with other citizens undergoing the same transition enlarging the potential for creativity and innovation.<sup>227</sup> They function as liminal spaces where individuals from diverse backgrounds converge to collectively engage in acts of making and cultural production that support their individual transformations. Conceptualising library makerspaces as transitional spaces of becoming, as thresholds of publicness that set the focus in their potential for social practices and communities while hinting at design approaches that include the collective and individual experience to support cultural values.

The upcoming presentation of makerspaces in library buildings represents a transformative force within libraries, reshaping their traditional functions. As the design of libraries continue to adapt to evolving community needs, makerspaces may play an increasingly vital role in fostering creativity, innovation, and community. Then, makerspaces could contribute to the enrichment of public life through the cultivation of cultural values such as digital literacy, gender equality, or creating resilient and inclusive communities for all. Yet, the spatial implications of the introduction of a new programme within an existing institution are under-explored.<sup>228</sup> Only a handful of academic articles has looked into the spatial arrangement and design of makerspaces in public libraries.<sup>229</sup> This chapter explores how design can boost the introduction of makerspaces in public libraries through using collective creation and by prototyping spatial proposals in eight pilot libraries throughout the Netherlands.

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<sup>226</sup> Van Gennep, *The Rites of Passage*.

<sup>227</sup> Turner, *The Ritual Process*.

<sup>228</sup> Caso and Kuijper, *Atlas: Makerspaces in Public Libraries in the Netherlands*.

<sup>229</sup> Bonte, 'More Kitchen than Grocery Store: More Kitchen than Grocery Store'; Barniskis, *Creating Space: The Impacts of Spatial Arrangements in Public Library Makerspaces*.



FIG. 4.2 Making is simultaneously an individual and collective action because it often requires cooperation. Making activities are inspiring for citizens of all ages, what is called life-long-learning. Image of the Tiel Medialab Makerspace after the intervention.

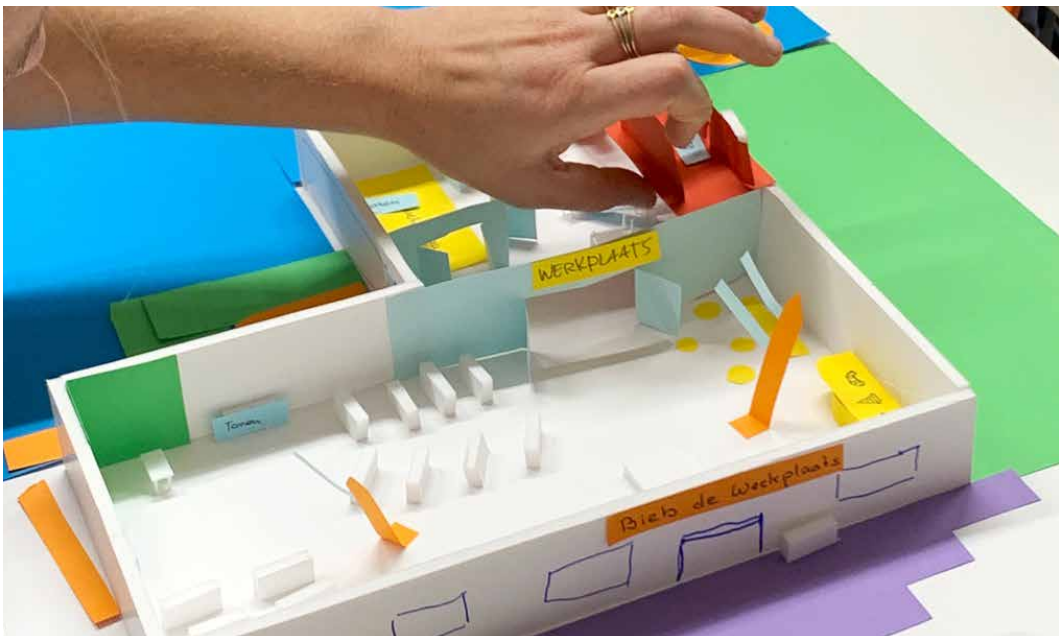


FIG. 4.3 Co-creation is supported by different tools and techniques such as workshops and model-making. Image of a co-creation workshop with library representatives exploring "The ideal future library".

## 4.2 Co-Creation and Design-Driven Research for Public Space Activation

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### 4.2.1 Makerspaces, Situated Knowledges and Cultural Values

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As previously presented, makerspaces are places of individual transformation and collective action that embrace the self-reflexivity processes of diverse citizens. The implementation of spaces for citizens to invent, create or produce has proven to revive the social importance of libraries by offering community spaces that promote wellbeing, address community needs, and engage marginalised groups.<sup>230</sup> The public life enrichment produced by library makerspaces is especially relevant for citizens that are often not central in public and cultural life such as children, adolescents, elderly, minorities or women interested STEM (Science, Technology, Engineering, and Mathematics).

Makerspaces in libraries have the purpose to expand knowledge access and material creation beyond books through gathering a diverse array of knowledges emanating from their communities. As Donna Haraway stated, the traditional notion of objectivity in science and knowledge production is obsolete, and all knowledge is situated within specific contexts and perspectives.<sup>231</sup> Makerspace in libraries centre situated knowledges around collective action to create shared cultural values. An example of such situated knowledge making action happened in December 2021 in Medialab Tiel where a group of migrants used the makerspace laser cutting facilities to practice their language skills while creating festive decorations with the laser cutter. The spatial configuration decisions and programming choices in Tiel were clearly directed at supporting and strengthening values of integration and belonging, following the co-creation wishes. The introduction of makerspaces in libraries should integrate collective knowledges in their programming and spatial configuration from an early stage to support diversity through collective action. Otherwise, makerspaces in libraries could become just rooms full of machines and tools for sporadic personal projects.

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<sup>230</sup> Taylor et al., 'Making Community'.

<sup>231</sup> Haraway, 'Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective'.

Diversity operates not only as a contextual concern but as a concrete outcome of the design approach. By co-creating the design brief and pre-design phases with citizens, community needs were integrated into spatial and programmatic decisions allowing for multiple forms of participation. For example, in Gorredijk, citizens defined a welcoming space as one where coffee and food had a significant role (Fig. 4.1.). Therefore, the design included a kitchen countertop with a coffee machine and a sink to host cooking workshops. In turn, a machine to print images on coffee cups allowed participation by groups traditionally excluded from makerspaces because they are intimidated by the technical difficulty of making. In this way, diversity was embedded in the spatial affordances and functional layout, proving how design can translate abstract inclusive intentions into tangible design outcomes.

Expanding the design approaches currently used for the adaptive reuse of cultural spaces by integrating co-creation tools can amplify the impact of these interventions on urban life. Makerlab highlights ways to implement co-creation tools to gather situated collective intelligence to drive the activation of public spaces by aligning with community values.<sup>232</sup>

#### 4.2.2 Co-creation as Situated Design Approach

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Intervening in an existing ecology demands a design approach that acknowledges the existing actors and actants within that ecology, what Braidotti calls an “embodied, embedded, and relational” approach.<sup>233</sup> Co-creation tools can support such design approaches by integrating situated knowledges into collective world making.<sup>234</sup> Differently to other forms of collective engagement, co-creation focuses on collective acts of creativity and imagination as collective problematisation.<sup>235</sup> That is distinct from co-design since in co-creation actors do not actually perform the design: they contribute to it with their collective knowledges.<sup>236</sup> Here, co-creation boosts the design process in three ways: it defines a “public” (embodied), it helps map the ecology (embeddedness), and collectively define the shared values of the community (relational).<sup>237</sup>

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<sup>232</sup> Di Siena, ‘Inteligencia Colectiva Situada’.

<sup>233</sup> Braidotti, ‘Posthuman Critical Theory’.

<sup>234</sup> Doucet and Frichot, ‘Resist, Reclaim, Speculate’.

<sup>235</sup> See Chapter 3 for an explanation of collective creation as an act of collective problematisation around shared matters of care.

<sup>236</sup> Sanders and Stappers, ‘Co-Creation and the New Landscapes of Design’.

<sup>237</sup> Harteveld and Muñoz Aparici, ‘Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design’.

The techniques used during the co-creation workshops aim to clarify the embodiment, embeddedness and relationality entanglements in the ecology through (Fig. 4.3.).

- 1 Network mapping
- 2 Spatial analysis
- 3 Identity & mission
- 4 Values & personality
- 5 Appearance
- 6 One-liners

During the co-creation workshops, participants recognised the ecology of affects around the space (1). Once situated in the larger urban network, they analysed the current situation of the space, if already existing (2). To constitute a public, the next activity demanded participants to define a common mission and identify for the space that differentiates from any other, grounded in the situatedness of the library (3). Adjectives helped participants land the abstract spatial identity into more tangible terms: “If the space was a person, what kind of person would it be?” (4). A next step was to create a collective mood board connecting the adjectives with visual references of spaces embodying those personality traits (5). Finally, the co-creation sessions culminated with the drafting of one-liners as collective agreements of the aspirations for the space (6). Instead of lengthy programme of requirements, they agreed upon their matters of care. These one-liners became the starting point for the designer to produce spatial strategies and functional layouts supporting them. Later, the design process was led by the designer in close contact with the responsible stakeholders, not all participants. Again, the objective was not to co-design the space but to co-define the matters of care, the values it should embody.

### 4.2.3 Framing Co-creation and Design Authorship

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In the Makerlab experiments, co-creation is used in a particular way. It functions primarily as a phase of collective problematisation during the pre-design stage, where situated knowledge from librarians, managers, library users, makers, and external actors is brought together to collectively define what a makerspace means in that public library. The situated knowledges and collectively defined values inform the design developed by the designer. After this phase, engagement with stakeholders continues through a conventional architectural process, including consultation, feedback, and coordination during design development and implementation. Clarifying this distinction matters because it positions co-creation as a tool for framing the design requirements and not a mode of shared authorship.

Design, and specifically public design, is a practice materially and procedurally situated. On the one hand, it is always placed in time and space both as a process and as a product. On the other hand, it is the “product of bodily, social, environmental, and cultural interactions” of the involved agents including the designer.<sup>238</sup> To use co-creation as research method, special attention is to be paid to the tacit knowledge, design assumptions. What are the evident and hidden actors? Who am I? What do I see that others do not? What do others see that I do not? What are my assumptions? Considering these apparent limitations is the way of defining the research’s boundary conditions and scientific accuracy. One cannot erase the complexity of reality but acknowledging it turns the focus towards the relevant aspects contributing to the body of knowledge. If co-creation aims to extract this collective intelligence as input for design proposals, incorporating collective intelligence might challenge the traditional architectural notions of authorship and aesthetics. Consequently, these innovative design approaches could change the role of architects and shift the focus from the architectural object to the design process.

In this research, co-creation is used as a tool within an array of DDR methods to investigate the design approaches that can support publicness activation in existing public space.<sup>239</sup> A design-driven approach aims to bridge the gap between theory and practice by translating abstract theoretical notions into design approaches and spatial interventions. DDR in this context is inherently situated, meaning it is shaped by the specific context of each design project. It acknowledges the complexity of real-world situations and embraces the entanglements emerging from personal and professional positionalities. For example, in Gorredijk the low digital literacy

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<sup>238</sup> Langdridge, ‘Situatdness’.

<sup>239</sup> More information on the research approach can be found on Chapter 2.

level of the stakeholders meant that the co-creation tool did not work, and the online workshop turned into an interview with participants. Adapting and iterating in continuous back-and-forth between theory and practice, thinking and doing. This non-linear approach allows for ongoing refinement and adjustment of research objectives, approaches, and reflections in response to emerging insights.

#### 4.2.4 Design Research Process: Reflection and Iteration

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The research project consisted of two-cycles of four pilot libraries with different communities, environments and aspirations. The process consisted of the following phases: Co-creation Process, Spatial Blueprint Design, Industrial Design and Implementation. The co-creation phase consisted of three workshops aiming at getting to know the libraries' spaces, communities and aspirations. After several iterations and adaptations to the digital needs due to the COVID-19 pandemic, the workshop structure was as followed.

- **Co-creation Process:** during a set of online workshops, a selection of library stakeholders collaborated with the researchers to collectively define the values and aspirations for the makerspaces' space and programming.
  - **Workshop 1 - Community & Space:**  
Coordinated by architect-researcher from Faculty of Architecture, TU Delft.
  - **Workshop 2 – Programming:**  
Coordinated by maker-researcher from Hogeschool Rotterdam.
  - **Workshop 3 – Mission & Spatial Manifestation**
- **Spatial Blueprint Design:** with the input gathered the architect-researcher produced a blueprint design. A blueprint consists of areas and guidelines instead of a finalised design. The blueprint improved with the feedback from library representatives to better respond to the collective process at hand (Fig. 9-12).
- **Industrial Design:** once the spatial configurations and programming were collectively agreed upon, Industrial design Students from TU Delft proceeded to develop design for products and experiences to equip the makerspace.
- **Implementation:** Libraries had a budget to implement the spatial blueprint and industrial design and to prototype the industrial designs produced by students.

#### 4.2.5 Design Process Steps

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The Design Process as developed by combining the professional experience of the architect-researcher with the specific needs of a library makerspace implementation. After iterations and modifications, the author developed a specific design process approach where co-creation was the central piece supported by observation and iteration.

- **Observation:** The process begins with a thorough observation and analysis of the existing situation in each space, considering both physical-material and social-immaterial aspects. This includes understanding the existing spatial layout, user patterns, community demographics, and the library's role within the broader urban fabric.
- **Co-creation:** Emphasising the importance of collective intelligence in design, the research employs a co-creation process involving library employees, users, and partner organizations. Group workshops are used to gather insights into community needs, and aspirations and values ensuring that the design solutions align with the lived experiences of the stakeholders.
- **Design:** Informed by the observations and co-creation workshops, the researcher-designer develops spatial advice, proposing layouts and interventions aimed at strengthening the makerspace's public conditions – visibility, accessibility, and appropriation. This advice outlines key functions and spatial gestures but avoids over-determination, allowing for flexibility and user agency in the final design.
- **Implementation:** The spatial advice is then translated into a series of concrete spatial interventions that are implemented in the pilot library. This stage involves close collaboration with the library staff and stakeholders to ensure a smooth integration of the new programme into the existing context.
- **Observation & Validation:** After the realization of the interventions, the researcher observes user interactions with the new makerspace, documenting its impact on the library's public life. This data is then used to validate or challenge the initial hypotheses about the design factors influencing public activation.
- **Reflection & Iteration:** Reflecting on the results findings, the research process iterates, refining the understanding of the design factors and informing the next cycle of interventions.

## 4.2.6 Co-creation Tools

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Because of the importance to consider the community needs and aspirations, collective creation activities were the core and motor of the design process. The collective creation employed a variety of tools and techniques to extract and integrate situated collective intelligence into the design process. These included:

- 1 **Network Mapping:** This tool helps visualise the relationships and power dynamics between different actors and actants around the project. By mapping out the existing networks and relations, the research identifies potential collaborators, key figures, and areas for building civic synergies (Fig. 4.4.).
- 2 **Spatial Analysis:** The research analyses the physical characteristics of the existing space, considering aspects like accessibility, visibility, flow, and potential for transformation. This analysis informs the design interventions by identifying opportunities and constraints within the existing built space (Fig. 4.4.).
- 3 **Identity and Mission Exploration:** Using branding design tools, the co-creation process explores the desired identity and mission of the makerspace, defining its core values and aspirations. This collective agreement serves as a guiding principle for the design interventions, ensuring that they reflect the community's vision for the space (Fig. 4.5).
- 4 **Values and Personality:** The step delves into the values and personality that the community envisions for the makerspace, using tools like verbal and visual brainstorming to create a shared mood board. This mood board captures the desired atmosphere and aesthetics of the space, supporting the design choices (Fig. 4.6).
- 5 **One-Liners and Themes:** The co-creation process culminates in the development of concise one-liners that encapsulate the key themes and vision for the makerspace. These one-liners serve as a communication tool, conveying the project's essence to both internal and external actors of the community (Fig. 4.6).

## 4.2.7 Design Approach

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It must be noted that the design process for researching the implementation of makerspaces in libraries developed for the MAKERLAB project originates as a personal approach building on the author's practical experience. During the co-creation phase, the approach was adapted and refined towards a stable co-creation tool. Without any pretension of finding a universal design method, the author combined professional and personal experience, skills and abilities into a design approach supported by a co-creation tool. This design approach was embedded in the design-driven research framework of the CA2RE+ network supporting design driven doctoral research. The continuous collective evaluation of this research project during the CA2RE Conferences ensured the method, approach and tools' novelty and research significance.<sup>240</sup> Besides the typological investigation on future libraries and public space, this research's objective is to prospect how design approaches to interior public space can active these spaces in the public sphere.

Approaching design as relational, embedded and embodied, the designer/ researcher positioned herself in a situated environment mapping the pre-existing networks of actants and actors to help conform a community of practice, a maker community. Then, through co-creation, trying to turn the implicit collective knowledge into explicit public values and spatial needs. Therefore, the design approach laid upon a specific positionality as a trained architect, non-native Dutch speaker and foreign woman. Personal background and experiences are inextricably connected with the design approach in this research project. This is true for every design project and especially for a project performed during a global pandemic where the personal and professional were blurred by the digital. This positionality inferred both strengths and limitations to the research and design approach. In any case, it must be acknowledged that these factors deeply influenced the process and outcomes. Usually, tacit factors largely influence design. Yet to be able to learn from design processes in design-driven-research, the situatedness, limitations and approaches need to be made explicit. Only in that way can other designers-researchers separate the specific from the general, the common from the particular and hopefully be able to extract relevant learnings.

As follows, the specific, tacit and situated from each design pilot case has been disentangled from the learnings themes and evidence that could be deemed as more general themes applicable to other cases of introduction of makerspaces in libraries. While these results are specific for this process, actors and design approach, they can contribute to professional and amateur communities of practice that want to explore makerspaces in libraries.

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<sup>240</sup> Muñoz Aparici, 'Makerlabs: Makerspaces in Libraries as Modern Spaces of Urban Belonging'.

#### 4.2.8 Design Experiment. Makerlab Project

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The MAKERLAB project, a living-lab research initiative funded by Stichting PICA and managed by the National Library of the Netherlands from 2021 to 2022, aimed to explore and support the introduction of makerspaces within Dutch public libraries. In collaboration with Hogeschool Rotterdam, FERS, the Industrial Design Faculty, and the Faculty of Architecture of Delft University of Technology, the project engaged eight pilot libraries across the country in a process of transformation. This transformation was structured into two iterative cycles, each involving four libraries, allowing for an iteration on the approach and tools.

The project emphasised the importance of spatial design in the successful implementation of new programmes in public spaces, particularly in libraries. It was driven by a design-based research approach consisting of three phases: co-creation through workshops, blueprint design by the designer, and design implementation.

Through co-creation workshops with relevant agents, the project harnessed the situated collective knowledge of the communities in and around the pilot libraries. This knowledge served as a foundation for developing design proposals, or blueprints, proposing strategies and functional layouts to successfully implement and activate makerspaces (Fig. 4.9.-12). Design proposals were continuously refined through conversations with stakeholders adapting to the unique needs and contexts of each community involved, while always managed and filtered by the designer/researcher as translator of the collective aspirations.

Research showed that co-creation tools are crucial to the activation of publicness because it creates publics and communities around a shared interest that feel acceptance, ownership and belonging in a space ensuring smoother implementation and engagement. In all pilot libraries, the internal support developed (or not) during the co-creation activities, influenced the degree or implementation or makerspace use once the project ended.

However, research also portrayed that, while co-creation is crucial, it is not sufficient on its own to drive substantial change. The findings suggest that to maximise the impact of public space activation in cultural buildings, design approaches must be transdisciplinary, integrating insights from social sciences, interior design, graphic design, and marketing with traditional architectural tools. This integrative approach was shown to amplify the effectiveness of public space activation strategies, leading to the development of a design toolkit for activating public life in cultural buildings.

In the subsequent sections, we will present the individual cases of the eight libraries involved in the MAKERLAB project, analysing the spatial strategies, functional layouts, and spatial elements designed for the pilot libraries. Additionally proposing a speculative synthesis of this multiscalar findings into a model a future library, a stable architectural form, contributing to the ongoing discourse on the role of design in public space activation (Fig. 4.18).

## 4.3 **Scaling Publicness: Multiscalar Design for Makerspace Integration in Libraries**

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After the eight iterations developed during the Makerlab project, there were some clear insights. On the one hand, the co-creation tool was sharpened composing a replicable tool. Next to it, after completing the project, critically reflection upon it allowed to clarify its results. Besides the situated design output, reflection showed some recurring moves that could constitute a design approach: urban embeddedness, spatial strategies, functional layout and spatial elements.

Together, they describe successive design moments within a single multiscalar design approach developed throughout the research. First, analysing the space's urban embeddedness to identify how the library, and particularly the makerspace, relates to its surrounding context. Combining this analysis with the co-creation results, spatial strategies are developed to increase publicness through specific actions such as visibility, independence or publicity (Fig. 4.13-14), supported by a functional layout that organises the programme and uses in an open and flexible manner. Finally, these layers are embodied in concrete spatial elements and artefacts that afford the intended forms of interaction, such as moving furniture, a coffee machine, or an outdoor pavilion (Fig. 4.15-17). Read as a continuum, the layers progressively articulate the abstract intentions distilled from co-creation into spatial and material form.

In the following pages we will present the fours layers of spatial interventions proposed for the libraries: urban embeddedness, spatial strategies, functional layout and spatial elements which should be interpreted as complementary and co-evolving.

### 4.3.1 Urban embeddedness of the library building

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Libraries are central to the social and cultural fabric of cities, serving as multifunctional spaces that nowadays extend beyond their traditional role of providing access to books and information. Their urban embeddedness in the urban fabric can influence their publicness through accessibility, appropriation and inclusiveness and therefore their impact in the living environment (Fig. 4.8.).

The urban embeddedness of the libraries and their material and immaterial accessibility also influence the spatial appropriation done by citizens. Libraries contribute to urban resilience by providing safe, inclusive spaces where people can gather, learn, and connect.<sup>241</sup> To do it so, their embeddedness must allow for diverse groups to appropriate the space. Ways of doing this in contemporary library design are through open, flexible spaces that can host a variety of activities such as educational programs, cultural events, and social services. This adaptability allows libraries to respond dynamically to the changing needs and values of communities.<sup>242</sup>

Furthermore, libraries play a pivotal role in community inclusiveness through fostering a sense of community and civic engagement.<sup>243</sup> They often partner with local organizations, schools, and businesses to deliver programs that address community needs, such as digital literacy training, job search assistance, and health information sessions. These collaborations enhance the library's role as a community anchor, strengthening social ties and promoting civic participation. In addition to their social functions, urban libraries contribute to the cultural and intellectual vitality of cities. They serve as repositories of local history and culture, offering resources that preserve and celebrate the heritage of the community. By hosting exhibitions, author talks, and cultural performances, libraries enrich the cultural landscape and provide residents with opportunities for lifelong learning and cultural engagement.

Traditionally, libraries are often situated in central or easy accessibility locations to facilitate access for diverse populations. However, such accessibility is not always evident. Especially in a context of reducing public spending in public libraries, sometimes libraries are forced to incorporate or be combined with other programs, challenging their impact in the city. Urban design and architecture are crucial for the integration of library buildings in the urban settings. This research shows ways of activating the agency of the public library through the introduction of makerspaces in diverse urban embeddedness.

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<sup>241</sup> Dudley, *Public Libraries and Resilient Cities*.

<sup>242</sup> Koen and Lesneski, *Library Design for the 21<sup>st</sup> Century*.

<sup>243</sup> Mattern, 'Library as Infrastructure'; Klinenberg, *Palaces for the People*; Oldenburg, *The Great Good Place*.

The eight pilot libraries presented quite different urban environments in scale, demography and appearance. They were spread around the geography of the Netherlands embedded in mid-sized cities of local relevance. What they had in commons is that all libraries were in a transition process searching for a new role in their community. The MAKERLAB project helped them define the community values they wanted to support through management, programming and space.

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#### 4.3.2 **Spatial strategies to activate makerspaces in libraries**

Beyond the urban embeddedness of the library in the city, the next crucial aspect for the introduction of a new programme in a library is the embeddedness of the makerspace within the library. Among the approaches to the embeddedness of the makerspace in the library, we extracted several spatial strategies that can benefit the impact of the makerspace in the library and therefore the city (Fig.4.13-14).

##### **Accessibility**

Especially when sharing the building with different partners, it becomes vital for the makerspace to be accessible, if possible, through an independent entrance. Then it can be accessed outside the library's opening hours which might broaden the programming offer. In Alphen Noord, the library is in a community building. Even the room where the makerspace is located is shared with another organization. Therefore, having clear and independent access ensures the makerspace's usability.

##### **Visibility**

One of the biggest conditions of publicness is for a space to be visible. Public space perception is the first step towards citizens' accessing it. Therefore, to attract users, makerspaces need to be visible inside the library and towards the street. When possible, windows can be used to display the processes and products of the Makerspace or even the machines. In Gorredijk, the blueprint presents a makerspace with a direct door to the village's high street making it visible to facilitate access (Fig. 4.11).

##### **Independence**

While the activities in a library makerspace are complementary to its program, sometimes it is useful to be able to use the makerspace independently from the rest of the building. Governance, noise or access control might be reasons to create a makerspace or a part of it that is delimited from the rest of the library. In Oldenzaal, the makerspace will be a detached pavilion in an adjacent patio. Giving makerspaces in libraries larger independence makes it possible for them to embody their own values (different atmosphere, identity or opening times).

## **Identity**

Every makerspace must create an identity: it could be inherited from the library, from its context or its programming. Preferably it should be a combination of the three. The identity of the place, its economy, culture and society can shape the programming and space. Colours, materials or verbal expressions can also strengthen the spaces' identity. In Hilversum, it was clear that the programming would be related to visual media because of the city's relationship with the industry. The makerspace then became a media platform to display ways of doing from the local media industry

## **Adaptability**

Makerspaces are meant to be living prototypes, not finalised products. Also, the activities are remarkably diverse and demand spatial flexibility. In some cases that includes movable furniture, in others, it means moving the whole makerspace! Some libraries already work with a travelling makerspace through their various locations in the form of a container, a suitcase or boxes. Because of an imminent move, the spatial proposal in Oud-Beijerland was to build a house in a house where elements could be tested, reconfigured and reused for the final location.

## **Integration**

Makerspaces in libraries' success depend on their physical and operational integration in libraries. Their space and programme can become a filter or nexus between the different activities in the building. For example, when embedded in hybrid buildings – the ones containing more than one function– makerspaces in libraries can incorporate diverse functions and themes. In Nijverdal, the makerspace becomes a filter between the leisure-oriented theatre programme and the knowledge-oriented actual library. The makerspace offers a living room where both programs come together to dialogue, where arts and knowledge perform together (Fig. 4.10).

## **Flexibility**

To empower users to create knowledge, makerspaces must be didactic. That means that they need to be self-explanatory. Preferably citizens can see from the street what and how things are made inside. Didactics bring together visibility, identity and interest. In Westland, the garden adjacent to the library became the learning playground for the makerspace. A moving kart connected the indoor workshop with the outdoor activities creating a metaphorical circular connection between functions (Fig. 4.12).

## **Publicity**

Sparkling interest in citizens and visitors is truly relevant in a spatial strategy for a makerspace. This can involve publicity, wayfinding, programme relevance or the use of colour. Spatially the interest must be drawn through the library to the location of

the makerspace. The accessibility and identity facilitate citizens' attraction to the space. In Tiel, a series of posters, objects and furniture pieces created a "pinball" effect and drew visual attention towards the actual makerspace through colour and textual indications.

### 4.3.3 **Functional layout: program, position and use**

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Once the spatial strategy to strengthen the space's publicness is clear, the next step towards a design was to look at the necessary functions present in a library makerspace. Previous research has found these functions to be Instruction, Design, Making, Showing, and Storing. The placing of these functions should follow the principles of the spatial strategy, to strengthen it.

#### **Instruction**

Before engaging in actual making, there is often the need to receive instructions on how to do it. For that purpose, it is important to have a space for presentations, talks or conversations complementary to the making. This can be part of the makerspace or be enclosed in a separate room. Ideally, it would be a flexible seating area in the makerspace where there are multimedia possibilities, and the machines and tools are also at hand. This is the case of Gorredijk where a central large modular table is used to instruct groups as well as for other activities.

#### **Design**

Once acquainted with the content and use of the makerspace, there comes a phase of designing by preparing, drawing or thinking about what will be made. The designing area should contain tables and chairs with appropriate lighting where participants can work in groups or independently according to their needs. In this functional area, it is important to consider the number of desired participants since hosting big groups simultaneously requires a large design space.

#### **Making**

The requirements of the making area change according to the content and programming of the makerspace. It can range from laser cutters and 3D printers on a countertop to a recording studio or green screen. For safety or nuisance, making areas can be enclosed or separated but should be as visible as possible from the rest of the makerspace and library to ensure accessibility. In Nijverdal, the machines and tools were contained in a separate room with glass openable doors that facilitated flexible use.

### **Showing**

The objective of introducing makerspaces in libraries is to facilitate knowledge creation and learning. One way of doing so is by demonstrating the making process and products. Exhibiting the making activities helps engage future participants, create a community, and eventually support small entrepreneurship by selling products. Given the large glass surfaces available at the Medialab Tiel, showing the makerspace became a pivotal point of the design.

### **Storing**

A makerspace uses plenty of materials of varying sizes to perform its activities: wood, paper, scissors, laptops, robots, and greenscreens. One of the most common pitfalls of makerspaces in libraries is to neglect storage space which often leads to messy spaces or impractical storage far from the making area. A good recommendation is to include small-scale storage such as drawers or cabinets around the machines and larger full storage rooms for other objects.

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## 4.3.4 **Spatial Elements: Multiscalar, multimedia and multipurpose**

The final scale of the intervention in a makerspace are the elements that support the functions within the spatial strategy. Depending on the scale of the intervention these can range in scale. To successfully have an impact in the library and the city, the elements should go beyond the boundaries defined for the makerspace and colonise the library, the public space around it and even extend to the city and surroundings. To extend the impact beyond the boundary, design must go beyond the boundaries.

The following elements are a non-conclusive selection of possible additions for a future makerspace within a library that can (and must!) be interpreted and translated to the specific situation of the makerspace at hand (Fig.4.15-17).

### **Informal sitting**

Next to the sitting necessary for the actual making, makerspaces can benefit from introducing informal sitting. Stools or stackable chairs allow users to appropriate the space according to the desired activity.

### **Modular table**

A modular table (composed by different independent pieces) allows the makerspace to adapt to its divergent functions (instruction, designing or making) both in groups and independently.

### **Showcase**

A relevant and overlooked makerspace function is showing the products and processes of making. Showcases (bookshelves, boxes, tables) open and present the makerspace to the street and library.

### **Wayfinding**

Slogans, logos and signs can help locate the makerspace inside and outside of the library building. It can be combined with furniture, posters or pavement.

### **Curtain**

Makerspace activities can cause nuisance to other library activities, placing a curtain with see-through points creates independence while maintaining visibility between the makerspace and the library

### **Coffee machine**

In Dutch culture, offering coffee or tea is a sign of hospitality. Placing such machines free to use is a way to make the makerspace lively and welcoming to visitors.

### **Games**

Makerspaces might become empty when there are no programmed activities. A way to seem approachable and avoid the “black hole” is to place games and objects on the tables.

### **Posters**

Placing posters inside and outside the library can enhance the publicity and visibility of the makerspace in the library and the city.

### **Adapted lighting**

The diverse functions and activities developed in a makerspace demand adapted lighting: brighter and cooler for focus activities and warmer ambience lighting for social and group activities.

### **Pavilion**

Makerspaces in libraries can also benefit from having their external structure. Placing functions such as machines or instructions in an external pavilion can increase identity, independence and accessibility.

### **Pantry**

Making activities may need utilities such as water, electricity and fridges. A pantry can serve to make, store and even support social activities such as coffee, tea and cooking workshops.

**Podium**

A podium gives the possibility to combine storage, showing the products made, sitting during instruction or making, and defining areas within the makerspace. It can be used indoors or outdoors and even be placed on wheels.

**Moving kart**

Makerspaces do not have to be restricted to a fixed area of the library. A moving kart can give flexibility for outdoor activities or workshops in other parts of the library.

**Media support**

To support making activities, especially during instruction and design, it is relevant to have media support (i.e. projectors, screens, iPad).

**Pavement island**

In an open library space, it might be helpful to visually define the footprint of a makerspace. Creating a pavement island strengthens the makerspace's identity and independence.

**Box in a box**

Due to the nuisance or visual chaos created by makerspaces in open library spaces, creating a “box” inside the library can help organisemachinery, storage or ventilation.

## 4.4 Towards Libraries as Dynamic Thresholds of Publicness

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As shown by the literature, public buildings and particularly cultural ones like libraries, are becoming increasingly dynamic due to the fluid nature of late modernity. The MAKERLAB project exemplified the evolution of libraries from traditional knowledge centres into active public spaces that respond to the fluid and reflexive nature of late modernity. By conceptualising libraries as “dynamic thresholds of publicness” that facilitate the transition between the private and public realms, the study sought to investigate how these spaces can accommodate and reflect shifting cultural values, particularly through the inclusion of makerspaces. The transformation of libraries from enlightenment-focused institutions to multifunctional community

hubs reflects broader societal changes towards reflexivity and self-actualization. By incorporating makerspaces, libraries are redefined as places of becoming, where citizens can engage in the collective production of knowledge and culture.

This research showed the implications, challenges and potential future directions of designing libraries makerspaces for community engagement and cultural value formation. The study demonstrated that makerspace design could transform libraries from static repositories of knowledge into dynamic hubs of community engagement and creativity. To do so, makerspaces in libraries are to be seen as liminal spaces, where individuals undergo individual and collective transitions. These spaces foster a sense of community and collaboration, which also aligns with the perceived shift towards a performative understanding of public spaces, where the focus is on the actions and interactions occurring within these spaces. However, there is inherent tension between the traditional roles of libraries and the new functions introduced by makerspaces. Libraries have been places of quiet study and reflection, while makerspaces are more dynamic and interactive spaces. Balancing these differing needs within the same physical space requires careful consideration of spatial design and programming. The research demonstrated that co-creation and community engagement are crucial for the successful integration of makerspaces into existing library structures.

The research hypothesis was that beyond machinery and programming, space and its design could offer key support for the transformation of existing library spaces into makerspaces. While most literature had focused on the objectual and procedural aspects of makerspaces in libraries –what tools to buy or how to lead the process– this research showed that all of these aspects come together in a space that is not restricted to the actual boundaries of the makerspaces but that extends to the public sphere around it. The activation of a new programme inside an existing cultural building is a multiscalar and networked challenge. Therefore, it demands an interdisciplinary approach. While the study combined from the start the expertise of librarians, makers, architects and designers, the design process showed the shortcomings of this approach. The research approach underestimated the role of people and organization management in coordinating such transformations. Libraries are well-established cultural institutions where is not always easy to have staff on board for a deep transformation of the ways of doing. The research could have benefitted from marketing and publicity expertise to activate the space's publicness through advertisements, wayfinding or communication with external parties. In any case, these aspects where integrated in the architectural design. This integrative approach is essential for creating spaces that are not only physically functional but also resonate with the cultural values and needs of the community. Additionally, the project underscored the importance of viewing public space design as an ongoing process of public space activation rather than a finished built product. As society

continues to evolve, so do the spaces that serve public functions. This perspective calls for a shift in architectural practice towards a more process-oriented approach, where buildings are designed to be adaptable and responsive to changing cultural values and social dynamics of a liquid, reflexive and performative society. Finally, the MAKERLAB project makes a compelling case for the potential of makerspaces to revitalise public libraries and, by extension, the public sphere. Through careful design and community engagement, makerspaces can become powerful tools for cultural production and social connection, helping to navigate the complexities of late modernity and foster a more inclusive and resilient communities.

While the MAKERLAB project provides valuable insights into the integration of makerspaces within public libraries, several limitations should be acknowledged. This research was limited to the geographic and cultural context of the Netherlands, a developed post-industrial economy in Western Europe. The success of a makerspace is highly dependent on the needs and characteristics of the community it serves. Therefore, the findings might not be applicable to contexts facing unique challenges and opportunities due to variations in public policy, funding availability, and community needs. As such, the lessons learned from this project may not be fully transferable to other contexts without careful consideration of these differences.

The study's use of qualitative design-driven methods offers situated and specific in-depth insights. Yet it also presents limitations in terms of scalability and replicability. The findings are context-specific: rich in particular details and situations which may limit their transferability to other institutions. Additionally, the positionality of the architect-researcher, specific project dynamics and the co-creation context surely influenced the study's qualitative interpretations. When possible, the findings presented attempted to make these limitations explicit. Due to timing constraints, the project had a relatively brief time span which limited the project evaluation possibilities. Longitudinal studies following the spatial development over several years would provide a more comprehensive understanding of their evolving role and effectiveness in public libraries. Lastly, the project was performed during 2021 and 2022 during a global pandemic forcing activities to be performed online. While digital tools permitted a rich interaction with the community, we can presuppose the engagement, and outcomes could differ when all activities were performed in person.

## 4.5 Learning by Making: Design Approaches for Adaptive Reuse

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The MAKERLAB project was a living-lab exploration of how design can support the introduction of makerspaces in libraries at the intersection of architecture, design, and community engagement. In the context of late modernity, libraries are transforming from static knowledge consumption institutions into spaces of collective transformation and learning. Makerspaces arose as a programme to foster creativity, innovation, and cultural value creation in libraries.

The research has proven that makerspaces are dynamic thresholds of publicness that filter the transition between private action and collective engagement through spatial means. These spatial means are its urban embeddedness, spatial strategy, functional programme and interior elements. All these layers or scales must work together towards a clear design intention that aligns with the community values that emanated from the co-creation. What is the location of the library in the city? How visible is the makerspace from the street? Is the floor-plan open or closed? Are all functions accessible to citizens? Are citizens supposed to feel free to use the space independently? What are the elements supporting these activities? Are they flexible to move? Eight iterative processes proved that a multi-scalar, interdisciplinary design approach based on co-creation can produce makerspaces that support changing cultural values in contemporary libraries (Fig. 4.18).

This study contributes to the body of knowledge of architecture by exploring the spatial implications of introducing makerspaces in existing public libraries and to urban design by providing strategies for the activation of publicness in and around libraries, contributing to more inclusive and resilient urban environments. Furthermore, the pilots showed the benefits of integrating co-creation and design-driven methodologies to address the challenges of adaptive reuse in cultural buildings. Such an approach ensures community relevance and situated context-specific answers.

Interpreted in relation to the theoretical framework developed earlier in the dissertation, the Makerlab experiments redefine publicness as a relational and situated condition. Through collective problematisation, the experiment maps an ecology of actors and artefacts making visible how publicness in public interior emerges through interactions between human and nonhuman agents and actants. Beyond seeing publicness as an abstract or normative ideal, Makerlab situates it within specific organisational, social, and architectural conditions. By translating collectively

articulated values into spatial strategies and material artefacts, the experiment demonstrates how design can support the meaningful adaptive reuse of public interiors. Makerlab operates as an early foundational step in the dissertation's trajectory by establishing a basis for examining how publicness can be activated by design.

What is transferable from the Makerlab experiments is not a ready-made spatial solution, but a way of approaching design in cultural buildings. Rather than treating publicness as a stable property of space, these design approach respond to publicness as dynamic. The three layers of spatial activation –spatial strategies, functional programmes and elements– articulate and respond to change by accommodating publics, programmes and affordances without predetermining a single mode of use. Adaptability is embedded in the design approach itself. Strategies do not seek to resolve ambiguity but to integrate it in space to be able to embrace change. Ambiguity as productive anticipates later experiments in the dissertation, where thresholds are further explored as both material and immaterial conditions for publicness activation.

In conclusion, as we navigate the complexities of late modernity, libraries and cultural public buildings are transforming to better respond to changing cultural values. The MAKERLAB project proves that these institutions have the potential to activate their publicness in urban environment by embracing design strategies that adapt to evolving community needs. The pilot experiments proved the critical role of design in mediating public space transformation. This ongoing transformation underscores the need for architects, designers, and policymakers to collaborate on developing innovative approaches that reflect and support diverse social needs. Future research on makerspace design in public libraries could explore their long-term impact on communities and cultural values or examine the applicability of the design toolkit in diverse cultural contexts.



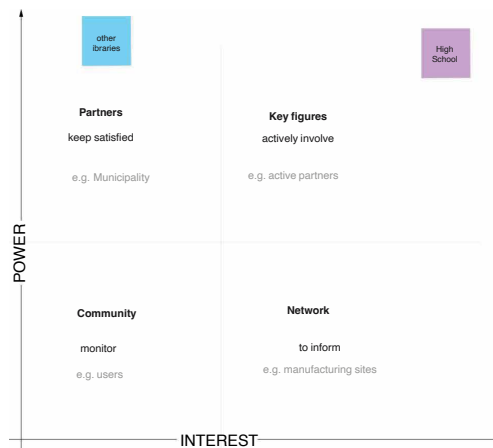
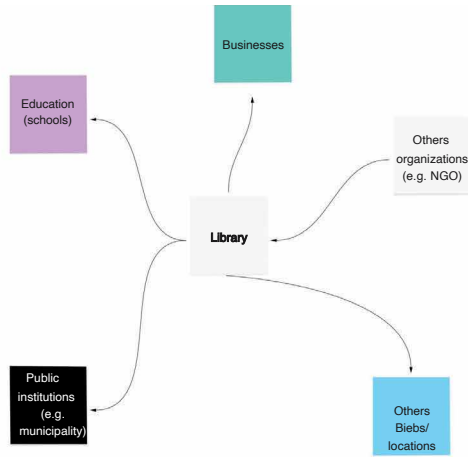
# Co-creation

Turning the collective knowledge into collective creation by distilling the public values driving the spatial transformation

## 1 - NETWORK MAPPING

Who are we and who are our (possible) actors?

→ Write the current and potential actors who are already involved or could be interested in the new program. Think big! Then try to map their interconnections. Finally place them in the chart according to their power and interest in the project. This will help you create new synergies and identify your community.



## 2 - SPATIAL ANALYSIS

What is the current state of the space?

→ Discuss and analyze the different aspects defining the current state of the space that will be used to introduce the new program.

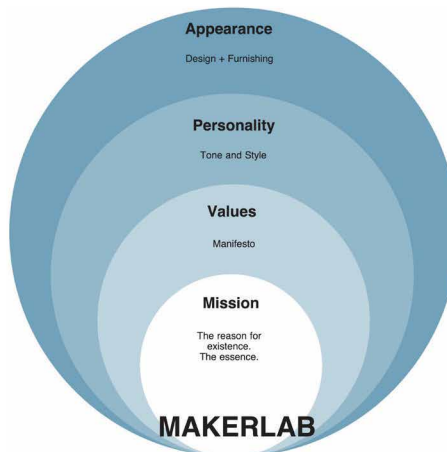
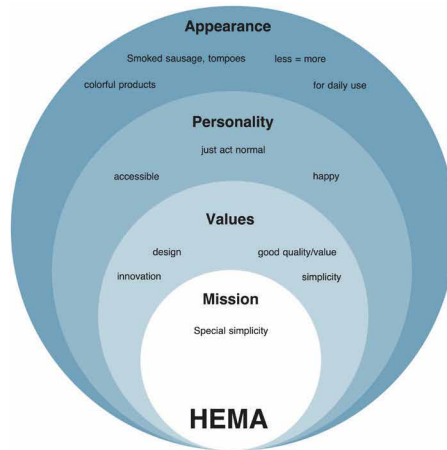


**FIG. 4.4** In the proposed co-creation tool, a first session focused on mapping the network or ecology followed by a collective early diagnosis of the space or building.

### 3 - IDENTITY & MISSION

What is the identity and mission of this community?

→ Using the example provided, fill in the different layers of the “identity onion”.  
Involve the stakeholders and community.



**4 - VALUES & PERSONALITY**

If the space was a person,  
what kind of person would it be?

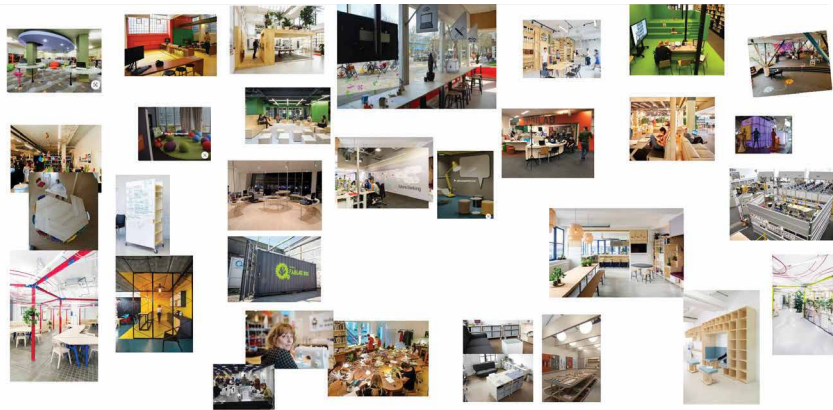
→ Discuss what are the adjectives that would apply to the space  
and which ones would not.

**FIG. 4.5** Borrowed from marketing and branding, the onion model can be articulated by using adjectives to define the space's personality and progressively translate that to the other layers.

## 5 - APPEARANCE

What would it look like?

→ First, select pictures of spaces that relate to the space's mission. Then, match them with the adjectives from the previous activity by possibly grouping them into some themes. The combination of images and words will be your moodboard.



## 6 - ONE-LINERS

How can you summarize the themes and mission?

—> Collectively turn the moodboard themes into one-liners that translate your spatial ambitions into a catchy phrase. The one-liners will help explain the project internally and externally and will be the departing point for the spatial design.



FIG. 4.6 Starting with words and only then connecting them with images to create a moodboard clarifies the different meanings words can hold for different people.

**MODEL MAKING**

22.10.14  
Delft | NL

→ Workshop with a peer-group of pilot libraries with a makerspace to collectively design a library of the future integrating making as a key aspect.

→ Tool: model making



**FIG. 4.7** Model-making is an accessible tool to support participants in thinking spatially and creatively, when properly adapted and guided.



# Urban Embedment



GORREDIJK



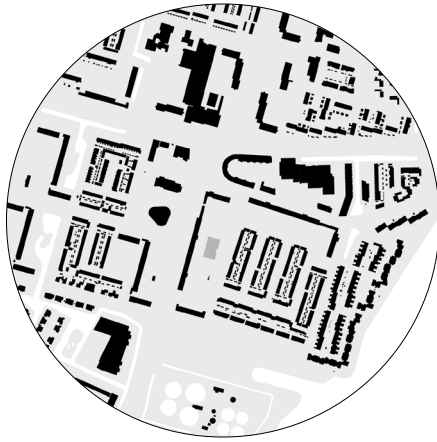
OLDENZAAL



OUD-BEIJERLAND



TIEL



ALPHEN-NOORD



HILVERSUM



NIJVERDAL



WESTLAND

FIG. 4.8 Pilot libraries differed in size, location and embeddedness in the urban fabric. Some were embedded in hybrid buildings, other were standalone infrastructures.

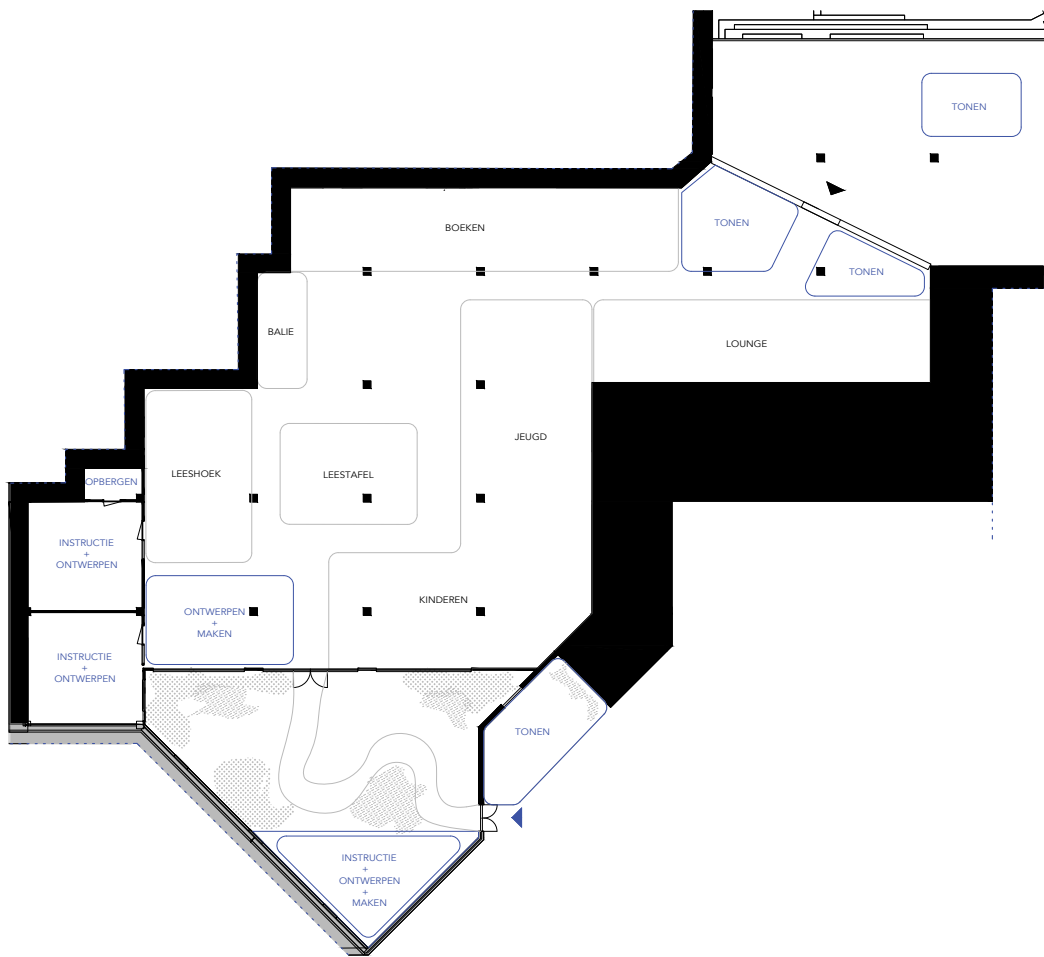
# Functional blueprints



## GORREDIJK

1 | 200





**OLDENZAAL**

**FIG. 4.9** Instead of delivering finalized floor plans, blueprints propose functional layouts based on the activities to be performed.



**OUD-BEIJERLAND**

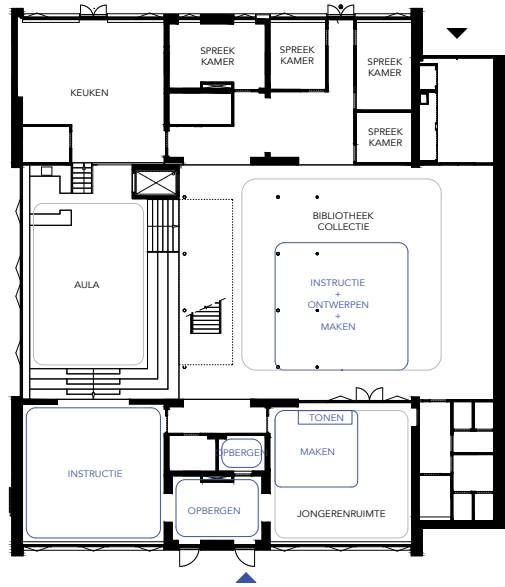
1 | 200





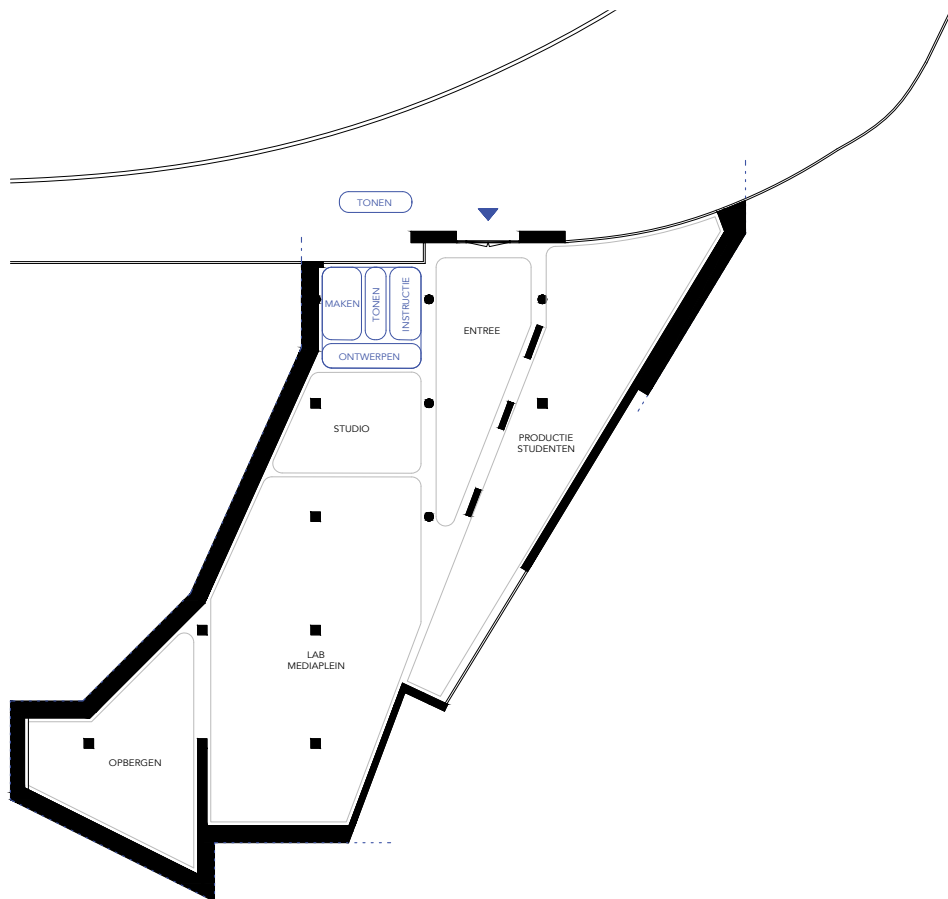
## TIEL

**FIG. 4.10** Makerspaces in existing libraries hold the most transformative power when they are embedded seamlessly in the library, and not tucked away in an enclosed room.



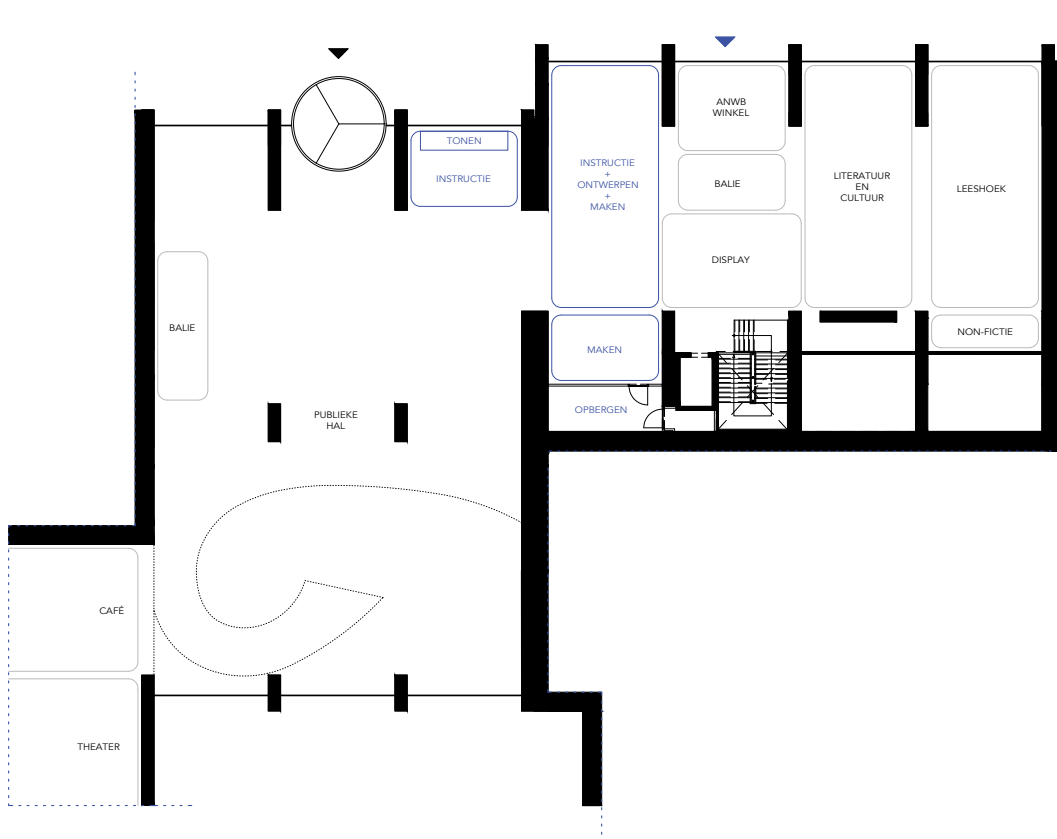
**ALPHEN - NOORD**





## HILVERSUM

**FIG. 4.11** Whenever possible, makerspaces should be visible from the street to activate the spatial publicness. In Hilversum the whole makerspace becomes a showcase towards the street.



**NIJVERDAL**

1 | 200

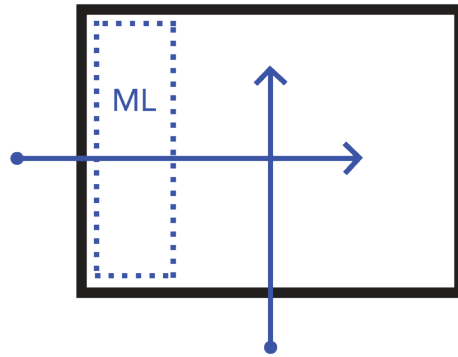




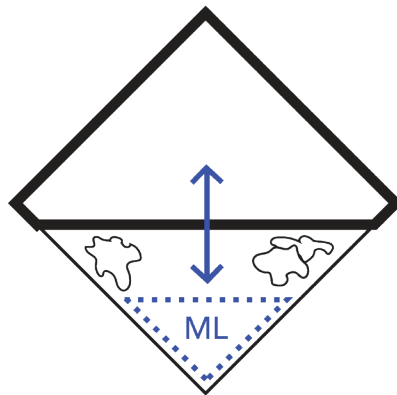
## WESTLAND

FIG. 4.12 Makerspaces do not necessarily need to be constrained to the interior, the public threshold can be extended to gardens or squares. As in Westland's case.

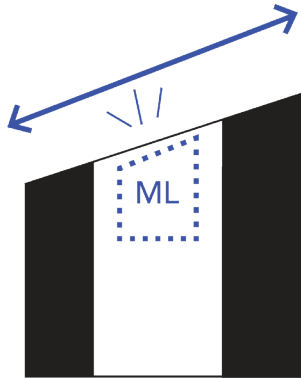
# Spatial strategies



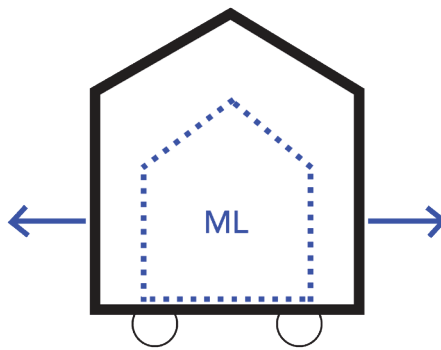
**VISIBILITY**



**INDEPENDENCE**

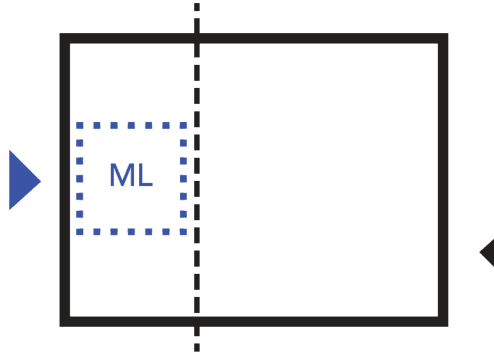


**IDENTITY**

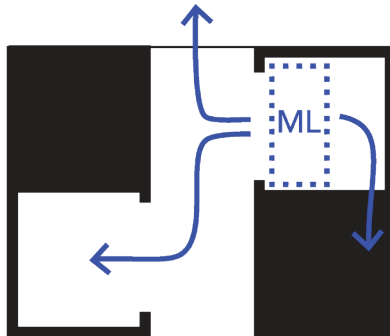


**ADAPTABILITY**

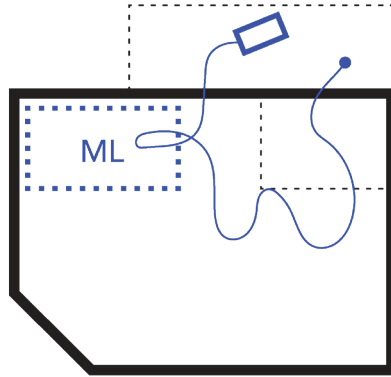
**FIG. 4.13** Although each library combined multiple spatial strategies, these schemes show the main ones developed per library.



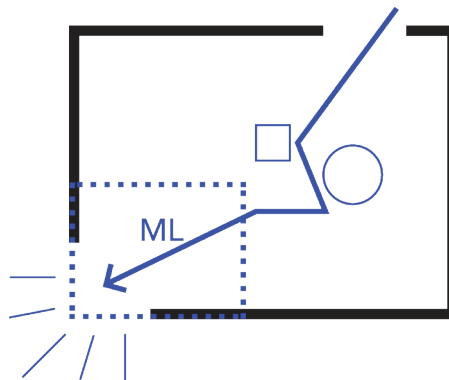
**ACCESSIBILITY**



**INTEGRATION**



**FLEXIBILITY**

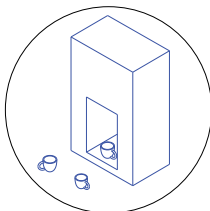


**PUBLICITY**

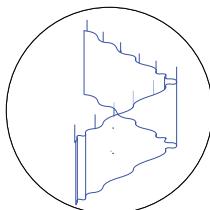
**FIG. 4.14** Schematic diagrams are the graphical counter-part of one-liners: a brief explanation of the design intent.

# Multiscalar elements

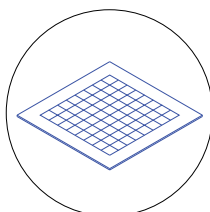
## S



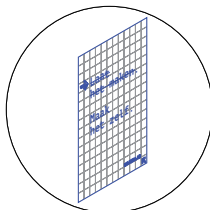
**COFFEE MACHINE**



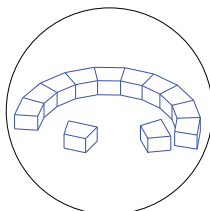
**CURTAIN**



**GAMES**

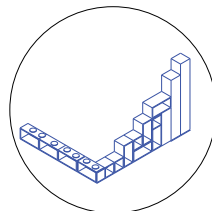


**POSTERS**

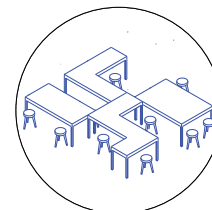


**INFORMAL SITTING**

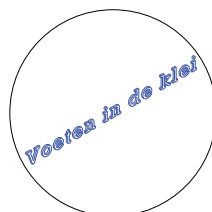
## M



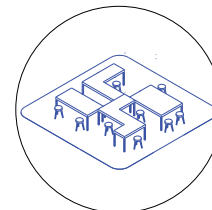
**SHOWCASE**



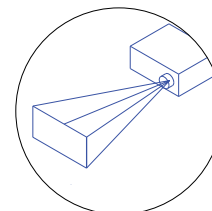
**MODULAR TABLE**



**WAYFINDING**

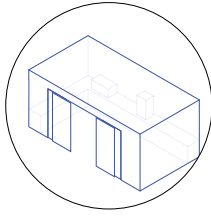


**PAVEMENT ISLAND**



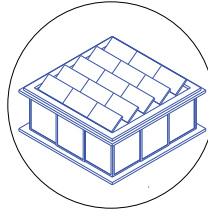
**MEDIA SUPPORT**

**L**

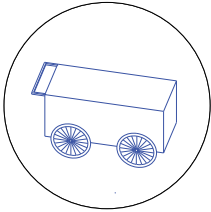


**BOX IN BOX**

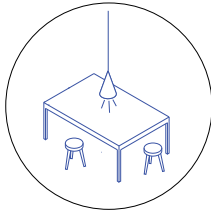
**XL**



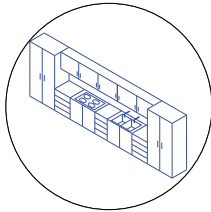
**PAVILION**



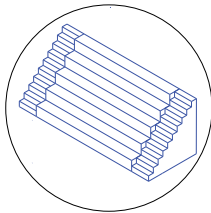
**MOVING KART**



**ADAPTED LIGHTING**

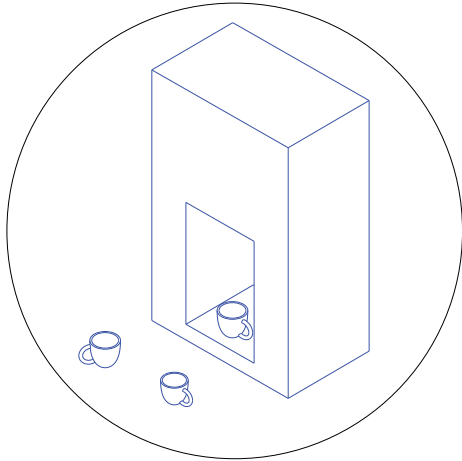


**PANTRY**

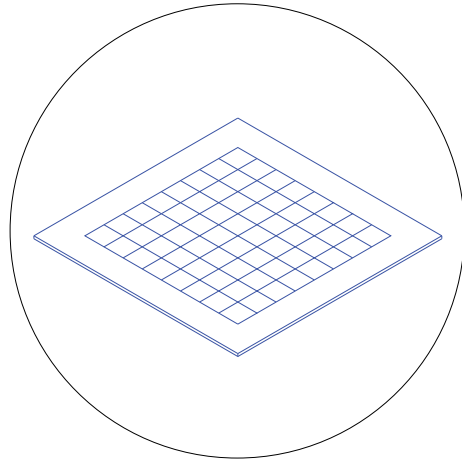


**PODIUM**

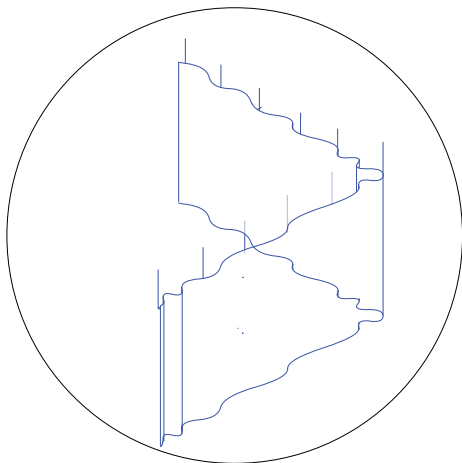
**FIG. 4.15** Out of all designs for the makerspaces, some elements emerged as relevant artefacts proposing affordances supporting publicness. These elements are multiscalar, multimedia and multipurpose.



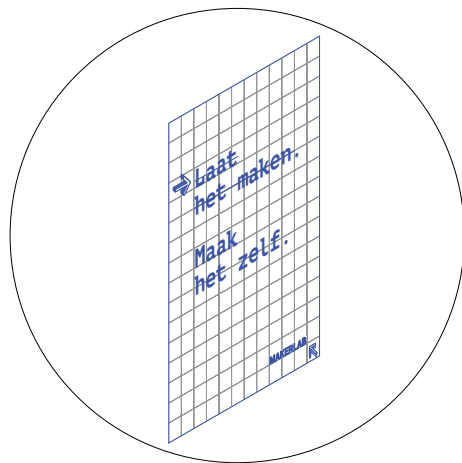
**COFFEE MACHINE**



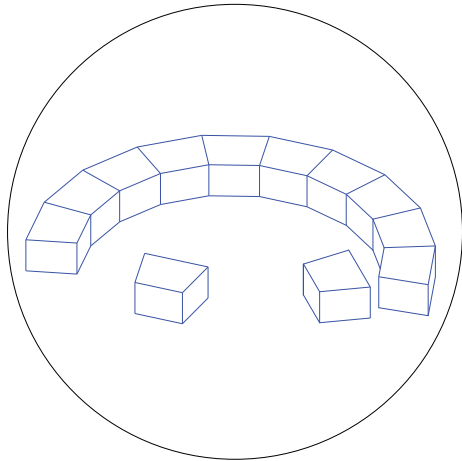
**GAMES**



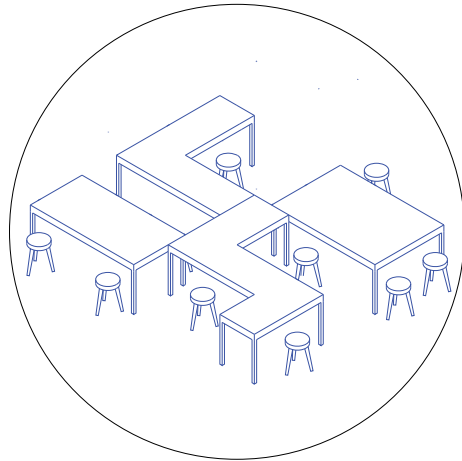
**CURTAIN**



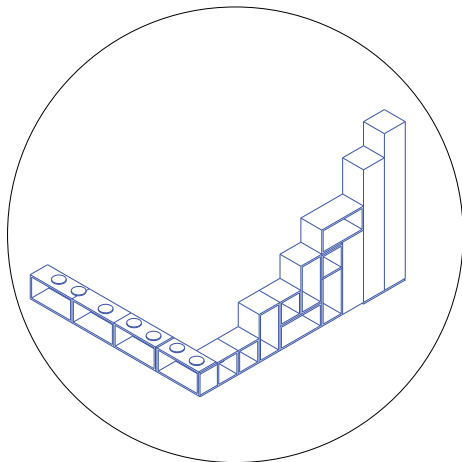
**POSTERS**



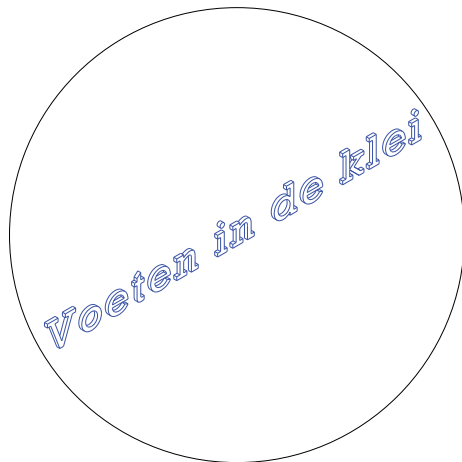
**INFORMAL SITTING**



**MODULAR TABLE**

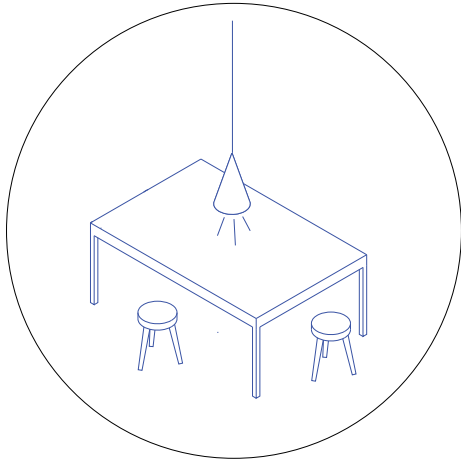


**SHOWCASE**

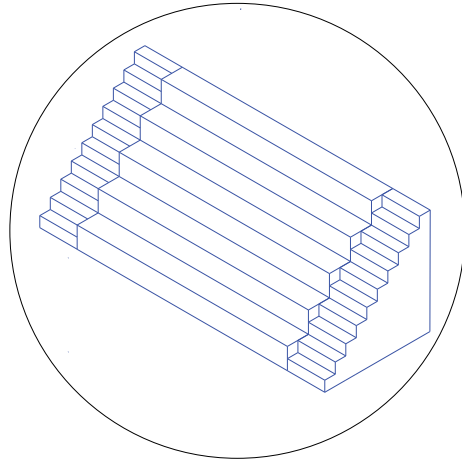


**WAYFINDING**

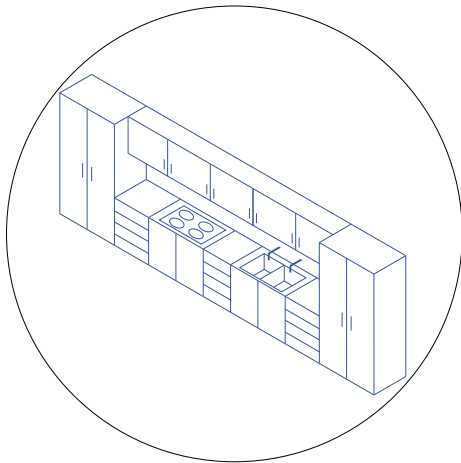
**FIG. 4.16** The relevance of these elements lies in how they contribute to publicness by supporting the spatial strategy and functional layout.



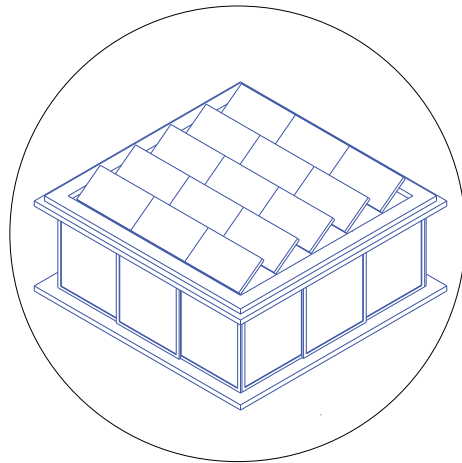
**ADAPTED LIGHTING**



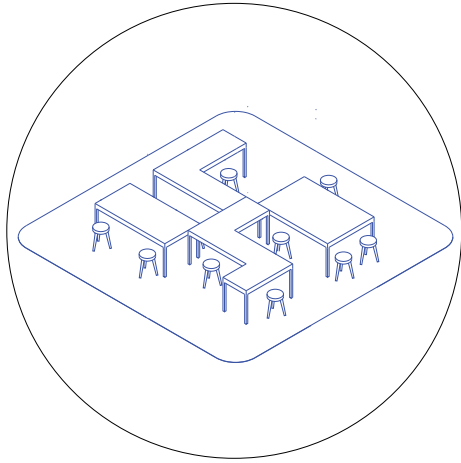
**PODIUM**



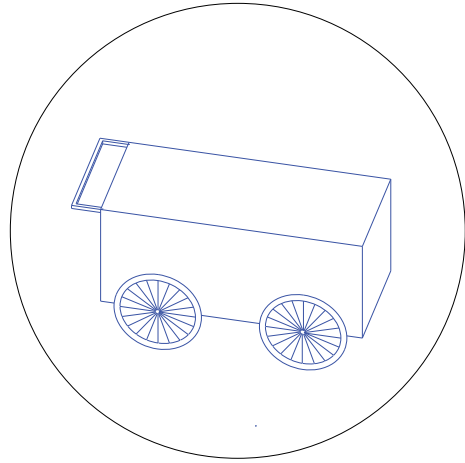
**PANTRY**



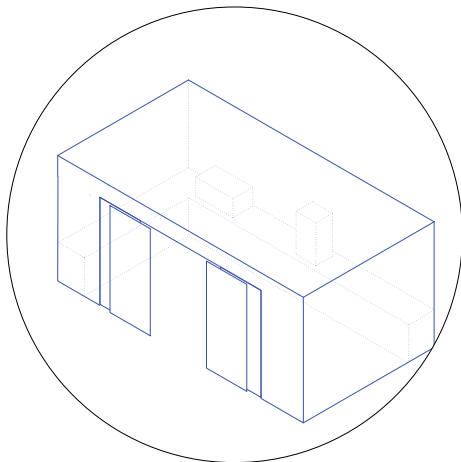
**PAVILION**



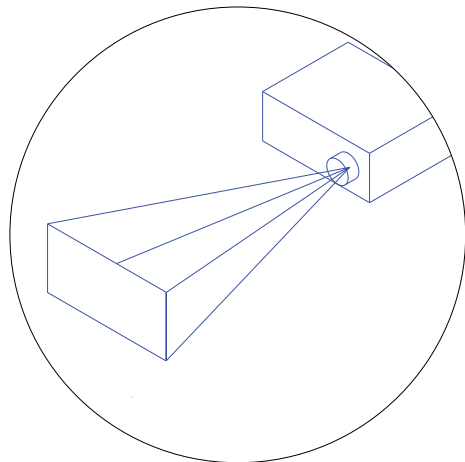
**PAVEMENT ISLAND**



**MOVING KART**



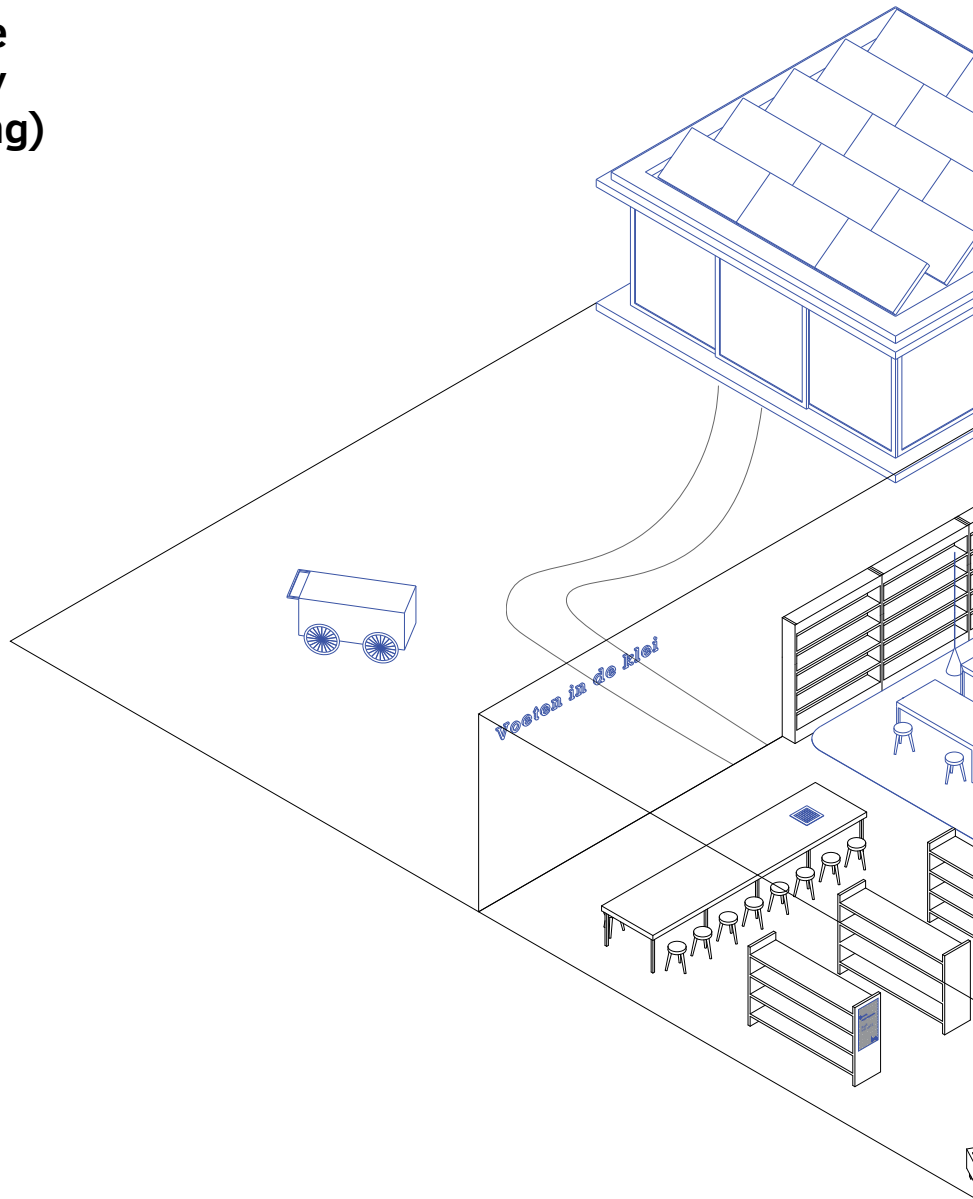
**BOX IN A BOX**

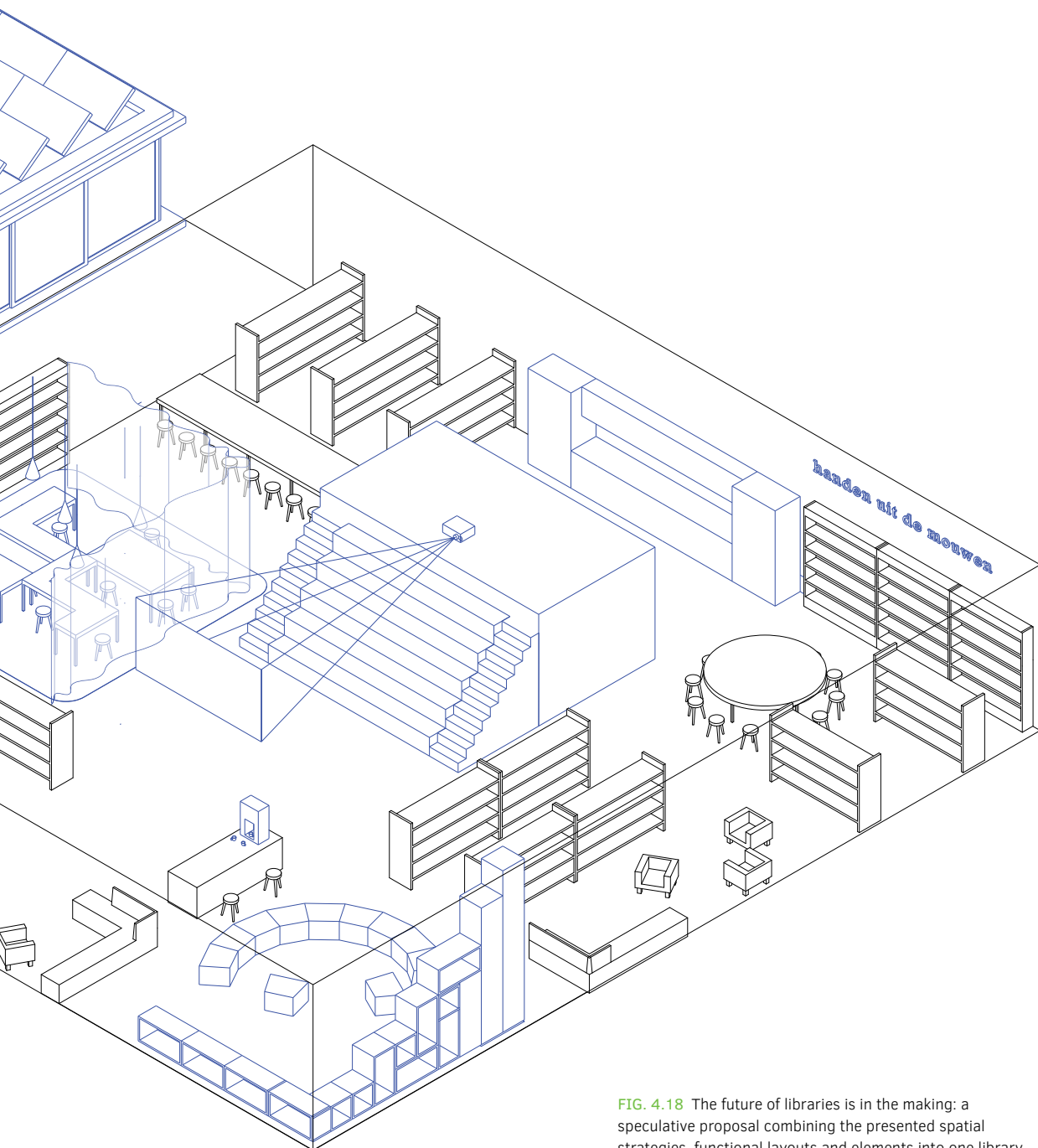


**MEDIA SUPPORT**

**FIG. 4.17** Spatial elements supporting publicness activation merge design disciplines such as graphic, interior architecture, landscape or urban design.

# A speculative future library (in the making)





**FIG. 4.18** The future of libraries is in the making: a speculative proposal combining the presented spatial strategies, functional layouts and elements into one library.

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# 5 Sliding Thresholds

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## Experimenting with Liminality to Activate Publicness in Interior Public Space

The current chapter presents the research results from a Fellowship Grant awarded to the author by Museum Boijmans van Beuningen to explore the concept of Threshold in their Zuid. location in 2022.

As explained in previous chapters, the second half of the 20<sup>th</sup> century hosted an increasing interest in public space, with special proponents in the US and Europe.<sup>244</sup> More recently, contemporary authors have explored the public interior as a facet of public space.<sup>245</sup> Despite the abundant existing literature on public space, how architecture can design the connection between outdoor public space –the street– and indoor public space –the building– is not yet fully examined. Especially understanding the citizen’s transition from exterior to interior public space as a continuous experience could provide very productive notions for better designing public spaces.

Public space research and design traditionally focus on outdoor spaces, such as streets, squares, and parks. Nevertheless, the public realm is not exclusively outdoors as it also comprises interior public space.<sup>246</sup> People meet and interact in both interior and exterior public space where they collectively create and negotiate public values.<sup>247</sup> Understanding public space in late modernity as a reality that outgrows polarising definitions shows an opportunity to explore the transitional space between exterior and interior public space as determining for the public experience and therefore public life. Better understanding public space’s shifting dynamics could contribute to design approaches that strengthen public space and the public experience for better living environments.

# Publicness  
# Liminality  
# Public Space  
# Urban Design  
# Architectural Design

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<sup>244</sup> Gehl, *Life between Buildings*; Jacobs, *The Death and Life of Great American Cities*; Lynch, *The Image of the City*; Whyte, *The Social Life of Small Urban Spaces*.

<sup>245</sup> Hartevelde and Scott Brown, 'On Public Interior Space'; Pimlott, 'Interiority and The Conditions of Interior'; Poot et al., 'The Public Interior'; de Solà Morales, 'Openbare En Collectieve Ruimte: De Verstedelijking van Het Privé Domein Als Nieuwe Uitdaging'; Teston, 'On the Nature of Public Interiority'.

<sup>246</sup> Hartevelde and Scott Brown, 'On Public Interior Space'.

<sup>247</sup> Francis, 'Changing Values for Public Space', 54.

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It was Saturday, October 15<sup>th</sup>, 2022, at the crossing of the Polderlaan and the Hillevliet streets in the Feyenoord area, Rotterdam South, the Netherlands. It was a rainy day with a heavy grey blanket covering the sky, marking the beginning of autumn. Because of the sudden arrival of the new season, the city was waking up slower than on a normal Saturday. Until 11:00 very few people passed through the crossing towards the market at the Afrikanderplein.

Around the community building of the Hillevliet, which was diagonal to the crossing, a lively rumour started to build up. More people entered than exited, more windows and doors opened than closed, and more lights were turned off than on.

When taking a closer look at the building, there was a strange change in its long sides: a bright green carpet rolling towards the street. At the end of the carpet, an imposing stair reminding of a boat ladder climbed the building's envelope towards a window. On top of the window, one could read in Dutch "Kom maar door" ("Come on"), a clear invitation to dare climb the parasite stair. Next to the stair, a woman was sitting under a large tree. She observed the passers-by and took notes at a polite distance like silently cheering for citizens to interact with the unidentified object.

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FIG. 5.1 Sliding into the public interior. A playful way to blur the threshold to engage in public life.

## 5.1 Cultural Buildings in Late Modernity: Liminality and Publicness in Cultural Buildings

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In the context of late or liquid modernity, liquification has also reached public space. Constant change and instability can turn any interior or exterior space to be considered public, urging the notion of publicness to be redefined leaving behind solid definitions. A space's publicness has been repeatedly defined by its ownership, management, accessibility and inclusiveness.<sup>248</sup> More recently, a new complexity of complexity has been introduced by conceiving publicness as a dynamic reality rather than an inherent spatial quality.<sup>249</sup> In this conception, publicness emerges from the participation in- and appropriation of- public space. It is fluid, contingent and emergent from the shared agencies of people, objects, material environments, meanings, and affects. Qian deepens the three-fold definition of "public space as situated and lived, as an assemblage, and as a liminal zone between inclusion and exclusion".<sup>250</sup> Since public space design's intentions usually focus on inclusivity, accepting that inclusion and exclusion are co-existent challenges common design practice. To increase a space's publicness with the objective to positively impact urban life through inclusion, designers should understand the mechanisms of publicness, including its undesired effects. Understanding how publicness works in public space becomes even more crucial when designing interior public space.

Particularly in cultural buildings, the building's enclosure filters publicness and can hinder or alter its effects. Therefore, what may happen at the enclosure, the edge, the limit between interior and exterior public space deserves especial attention. One dimension, accessibility, is the design variable that defines the boundary between the two realms. Accessibility and its variables such as visibility are a starting point of a space's publicness. It is assumed that if a space is openly accessible and visible, people will enter and engage in public life. However, cities are riddled with examples of interior public spaces that do not host public life or positively contribute to the public sphere. Observing the fluid emergence of publicness at the threshold between interior and exterior could open a valuable problematisation of how to design it.

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<sup>248</sup> Németh and Schmidt, 'The Privatization of Public Space'; Langstraat and Van Melik, 'Challenging the "End of Public Space"'; Varna and Tiesdell, 'Assessing the Publicness of Public Space'; Li et al., 'Defining the Ideal Public Space'.

<sup>249</sup> Qian, 'Geographies of Public Space'.

<sup>250</sup> Ibid.

The concept of liminality appears as a more productive framework than accessibility to explore the dynamics of publicness between interior and exterior public space. The current chapter utilizes liminality in public space to better understand the dynamics of publicness in existing interior public space to ultimately inform architectural and urban design approaches for community inclusion and belonging.

Public space liminality in public buildings lies at the boundary between interior and exterior space which happens to coincide with the boundary between urban and architectural design disciplines. The study of public space and therefore of public building accessibility is traditionally divided by climatic conditions (outdoor-indoor) and disciplinary limitations (urban-architecture). Therefore, research and design on interior public space's publicness has been hindered because it crosses two realms and two disciplines that are perceived as independent. Nevertheless, the boundary between indoor and outdoor, and architecture and urban design is more a threshold than a border. It is not a black-and-white, polarised or solid reality but more a fluid, contingent transition.

Similarly, engaging in public life is also a transition. In this transition or liminal process, is a rite of passage as Turner and Van Gennep defined it.<sup>251</sup> In this case, the rite of passage is from private individuals to engaging in collective action. Public life is defined by a threshold –Limen in Latin – “the level or point at which you start to experience something, or at which something starts to happen”.<sup>252</sup> The liminal process of engaging in public life is heavily influenced by the threshold defining the building's accessibility. The threshold of accessibility in public buildings is often reduced to the design of the façade and its openings. Conceiving the boundary between indoor and outdoor and architecture and urban design as a threshold or a transition instead of a border can lead to a more productive connection between the building and its surrounding space.

The division between indoor and outdoor public space has produced a disciplinary division between public space as the realm of urban design and public building as the realm of architecture. Although this division is practical from a professional point of view, it hinders the potentiality of public space design. When a citizen leaves a private space and moves through a public space towards a public building, that experience does not fully coincide with the constructed building envelope. The experience of a public building starts well before the citizen crosses the façade, challenging the professional division between urban and architectural design. The question is then how to integrally approach public space design that bridges professional and climatic divisions and focuses on citizen's experiences.

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<sup>251</sup> Van Gennep, *The Rites of Passage*; Turner, *Liminality and Communitas*.

<sup>252</sup> *Camb. Dict.*, 'Limen'.

This chapter presents the concept of liminality – a transition between estates of being– to challenge the interior-exterior and urban-architectural design divisions through a real-life experiment for Museum Boijmans van Beuningen in Zuid. , the museum’s programme in Rotterdam South (2020–2024) inside the creative hub De Hillevliet. Expanding on the museum’s aspirations for the Zuid. programme, the study explored questions of openness, accessibility, and the threshold between inside and outside through creative activities, co-creation workshops, spatial interventions and presentations developed with local makers, social partners, and key figures from the hyperdiverse neighbourhood.

The experiment called Limen expected to prove a parallel between the notion of liminality and the dynamics of accessibility in public buildings such as De Hillevliet highlighting the specific challenges faced by public spaces hosted in repurposed buildings through adaptive reuse.

## 5.2 Observing, Co-creating and Experimenting with Liminality in Public Space

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### Approach

Demonstrating the relationship between design and publicness is a challenge that urban and architectural design have tried to solve with the introduction of methods borrowed from the social sciences.<sup>253</sup> In line with that, designers have incorporated participatory methods or ethnographic tools into their toolkits to better integrate communities and public values in design. Such a turn confirms that designing to strengthen publicness demands an integrated approach that focuses on the spatial affects produced on the city and its citizens. The exploration of publicness as a potential urban change-maker also demands transgressing common design and research boundaries.

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<sup>253</sup> Manuela Mendes et al., *Architecture and the Social Sciences*.

## Co-creation

To research how publicness can be influenced by design, the perspective must shift from design as a material construct towards placing citizens and their collective practices at the origin of design. The exploration of liminality in public space in Zuid. Boijmans was guided by collective creation as an act of collective problematisation<sup>254</sup>. Collective creation by engaging with actors early and often, talking to them, discussing with them but most importantly listening to them— rather than obeying them. Through collective creation, the designer can find, understand or even create the problem, while sharpening it collectively. Approaching co-creation as collective problematisation contrasts with the belief that co-creation entails letting go of the designer’s responsibilities. If anything, it accepts that collective intelligence creates better problems and better solutions, and the designer’s role is to support actors with the available tools.<sup>255</sup>

Particularly, in the Zuid. Boijmans case co-creation consisted of conversations, creative workshops involving models and graphic material, and the limen experiment as the culmination of the collective problematisation (Fig. 5.6–5.8).

## Methods & Tools

The co-creative approach was supported by a mix of methods and tools revolving around observation and experimentation. Observation happened throughout the study and particularly around the experiment, at the start and a one-off intervention evaluating the research hypotheses.

## Observation

Observation as a tool to research public space and extract lessons for its design has been widely explored in the XXth century. In the 1960’s USA context, Kevin Lynch was among the first to conceive the city as a series of images created by citizen perception.<sup>256</sup> Lynch observed citizen cognitive perceptions by observing behaviours in public space and dissecting the elements composing it such as paths, nodes or edges. While Lynch’s focus was on urban legibility and individual experience, Jane Jacobs popularised observing public space by focusing on the social life in cities. Her critique to modern planning presented an “eyes on the street” approach where informal citizen observation in public space shed light in which public space features allowed or restrained urban life and social

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<sup>254</sup> Hartevelde and Muñoz Aparici, ‘Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design’.

<sup>255</sup> See Chapter 4 for more information on the applied co-creation framework.

<sup>256</sup> Lynch, *The Image of the City*.

inclusion.<sup>257</sup> She learned from William White who took a step forward by conducting a systematic observation of citizen behaviour's in public spaces through filming. He analysed how some design elements such as seating, shadow, visibility influence people's behaviours in public space and therefore social interaction.<sup>258</sup> Jan Gehl combined the long tradition of public space observation into a prescriptive approach to first assess public spaces and then transform them by designing people-centred, liveable, comfortable spaces.<sup>259</sup> The approach used in the current experiment draws on the aforementioned tradition of public space observation both for the analytical part prior to the spatial intervention– by observing the everyday life, trajectories and social interactions– as much as for the observation of citizen behaviour around the spatial intervention.

In this situated design approach, observation was a constant variable in the research development. The project started by informally observing what where the challenges of De Hillevliet building: how people looked at it, approached it, accessed it (or not), talked about it or parked their bikes in front. Later, the co-creation sessions in and around the building showed how citizens used the interior and exterior public spaces. It was through observing citizen trajectories in public space that it became clear that –because of its corner and diagonal position– the building was standing in the way of citizen walking trajectories. Citizens coming back from the market walking with their hands full of groceries as close as possible to the façade to spare a couple of meters. Inside the building, there was a corridor parallel to the street that could offer an urban shortcut. This was the seed for the later spatial intervention: creating an urban shortcut that invited citizens to access the building.

## Experimentation

Traditionally, innovations in the built environment can only be tested once and that is when the space is built, leaving little room for change. Given the complexity and long-term timelines needed to produce changes in the built environment, testing new spatial design models can be challenging. In the contemporary context of late modernity change is considered a constant, reference points and social values are continuously transforming, in what Zygmunt Bauman called “liquid modernity”.<sup>260</sup> In this ever-evolving context, there is a need to explore new ways of testing design solutions in public spaces that better adapt to changing communities.

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<sup>257</sup> Jacobs, *The Death and Life of Great American Cities*.

<sup>258</sup> Whyte, *The Exploding Metropolis*; Whyte, *The Social Life of Small Urban Spaces*.

<sup>259</sup> Gehl, *Life between Buildings*.

<sup>260</sup> Bauman, *Liquid Modernity*.

In fields such as the natural sciences, experiments are commonly used to evaluate hypotheses that are later extrapolated to larger topics. For example, in medicine, experiments with real-life cases create a productive exchange between research and practice, closing the so-called evidence-to-practice gap.<sup>261</sup> When it comes to the study of public space in the built environment disciplines, there is a large gap between research and practice approaches. On the one hand, public space research often explores public space as an abstract reality and looks for generic answers often supported by philosophy and sociology. On the other, design practice addresses public space through concrete physical interventions often without aspirations to conceptualise it. There seems to be a possibility to productively engage public space research and practice by combining their respective approaches and tools. Therefore, testing through spatial interventions appears as an innovative approach to connect theory and practice by turning concepts into experiments.

The current study used one-to-one experiments to test concepts by transforming theoretical hypotheses into spatial interventions. These interventions are situated and draw on the specificity and complexity of a real-life space. The researcher/designer creates a specific spatial design proposal that explores theoretical research questions by bringing together the abstract and the actual, the global and the situated, the general and the particular in a reflective practice.<sup>262</sup> The expected outcomes of the research method are two-fold. It first aims to prove the pre-defined theoretical hypotheses while also attaining to prove the effectiveness of spatial interventions as a research experiment method. These spatial experiments are performed by spatial interventions, or design alterations of a public space for specific objectives. The interventions develop around artefacts: designed objects that are expected to alter citizen behaviour in public space through affordances. Affordance is a term from ecological psychology that explains an individual's environmental possibilities for action.<sup>263</sup> Affordances are relational, they are born from the interaction between individuals and their environment.<sup>264</sup> In this case, the artefact introduces possibilities for users to perform predictable or unpredictable actions. In this experiment, the observation of the different affordances around the artefacts and spatial intervention would either confirm or deny the research hypothesis.

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<sup>261</sup> Lang et al., 'Knowledge Translation'.

<sup>262</sup> Schön, *The Reflective Practitioner*.

<sup>263</sup> Gibson, *The Ecological Approach to Visual Perception*.

<sup>264</sup> Widmer and Rérat, 'Operationalizing Affordances for Public Space'.

## Positionality and limitations

*'Sometimes we simply have to keep our eyes open and look carefully at individual cases not in the hope of proving anything but rather in the hope of learning something!'.<sup>265</sup>*

Such an experimental approach presents limitations regarding scope, situatedness and scalability. The experiment was part of a larger study with a specific location and context. The researcher/designer selected the case from the available opportunities according to their suitability for the research objectives. Therefore, the positionality of the researcher/designer together with the needs and aspirations of the actors steered the research in a particular way introducing multiple biases. These biases involved the designer/researcher and stakeholders involved because they emanate from the personal beliefs and cultural background provoking thinking, judgement and memory illusions.<sup>266</sup> The biases mitigation started during the co-creation phase, continued during the design phase and were especially relevant during the experimental observation. In the observation phase, avoiding the confirmation bias that would induce observers to confirm the validity of the hypotheses was key especially because privacy challenges impeded recording or taking pictures involving people during the experiment, so the noted observations were the only data available to analyse the experiment. Acknowledging these biases helped mitigate their effects on the research results.

First, because the process was led by collective creation, the multiplicity of actors and engagement tools attempted to lower the biases of the collective problematisation. Instead of the researcher/designer thinking from their desks what the problem and solutions were, using diverse tools with diverse actors ensured the refinement of the research hypotheses and spatial solutions. In other words, all decisions and questions were negotiated between the researcher and the actors. Therefore, no single decision was taken unilaterally thus the biases were negotiated and presumably lowered.

The observation of the experiment was done by research assistants with minimal involvement in the research and design process to avoid the confirmation and observer bias. That is, they were not involved in the decision leading to the design solution. They were given a research protocol that they could give feedback to during a group briefing (Fig. 5.19). To mitigate the effect of personal beliefs and

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<sup>265</sup> Flyvbjerg, 'Five Misunderstandings About Case-Study Research'.

<sup>266</sup> Pohl, *Cognitive Illusions: A Handbook on Fallacies and Biases in Thinking, Judgement and Memory*, 79.

cultural background, there was one observant on each side of the artefact (exterior and interior public space), and they changed positions during the experiment to get multiple perspectives on each location. Also, mixing verbal and graphical tools for noting the observations helped alleviate the linguistic limitations of the observers being non-native English speakers from divergent backgrounds. Verbal concepts can produce “rigidity of thought” which means that the words we know for concepts can restrict how we create and observe.<sup>267</sup> In this case, liminality is a less known concept while accessibility brings multiple conceptions that may have influenced the research results.

The limen experiment was a situated and collective act of world-making.<sup>268</sup> Its situatedness and embeddedness are both limitations and strengths of such an experimental approach.<sup>269</sup> Also, the role of the researcher/designer hold dual power: the author engaged in world-making as an embedded design practitioner, as a non-Dutch native speaker, as a Spanish woman, as an architect, and as a citizen of Rotterdam. It must also be noted that the Fellowship was funded by the Museum Boijmans therefore establishing a client-designer bond. Furthermore, the recovery from the COVID-19 pandemic and its effects on public life also influenced the study. All these characteristics make the study extremely interesting in its situatedness yet make it impossible to directly extrapolate its results to other situations. The scalability of the study remains on the approach to the design process, not the specific solution to the situated challenge.

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<sup>267</sup> John-Steiner, *Notebooks of the Mind : Explorations of Thinking*, 86.

<sup>268</sup> Doucet, 'Chapter 2 Architectural Storytelling'.

<sup>269</sup> Doucet and Frichot, 'Resist, Reclaim, Speculate'.

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The enigmatic stair flooded into the street through a sharp green carpet marking a clear pathway perpendicular to the façade. As if folding vertically, the green stain disappeared through the window suggesting an interior continuation.

The steep stair steps lead to a plateau connected to a slide. The sight from the top was impressive. Seating at the edge between interior and exterior, at the very climatic border, was the moment to decide whether to explode the comfort of one's bubble by sliding into the collective action taking place inside the building, or retreating by climbing down the stair back to the street.

Inside the space, groups of children participated in art workshops while adults chatted and observed the futuristic interior. Bookshelves full of crafted objects and drawings contrasted with the metallic accents of the furniture.

The same green carpet found outdoors traversed the room extending in a straight line through a corridor towards the other side of the building.

At the end –as if looking in a mirror– there was an exact copy of the slide under my legs where I could see other citizens plunging into the interior space.

As a magnet, the stairs and carpet invited passers-by to detour and cross the public threshold, to activate their agency and engage in public life.

Observing visitors, objects and signs, I had to ask myself: What was this place? What was in there for me?

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## 5.3 Limen: A Spatial Experiment in Public Space Accessibility

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### 5.3.1 Zuid. Boijmans van Beuningen: Lowering the Threshold of Art Spaces for Local Communities

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Museum Boijmans van Beuningen is a museum and art institution in Rotterdam with an extensive art and object collection. In an attempt to further engage the audience with their collection, they recently made the news for opening the “world’s first publicly accessible art depot” by “giving the public access to 151,000 artworks”, according to online design platform Dezeen.<sup>270</sup> Furthermore, they started a decentralised new location– called Zuid.Boijmans Van Beuningen (Zuid.). The museum’s new location is in an underprivileged South Rotterdam neighbourhood with the intent to bring the local community closer to art production (Fig. 5.2.). Such an attempt is framed within the “social practises” [..]“a collaborative, collective, and participatory social method for bringing about real-world instances of progressive justice, community building, and transformation”.<sup>271</sup> Zuid. occupies enclosed rooms inside the cultural community space De Hillevliet focuses on art creation and education for the local community of Rotterdam-South and especially the children and artists in its immediate surroundings. Despite the efforts to offer artistic programming to citizens during the first months, the low engagement made clear there was a problem with the space’s publicness.

During a research fellowship in 2021, the author explored how design interventions could lower the threshold to enter the Zuid. Boijmans art space. The research combined public space observation, a literature study on public space and liminality, co-creation and a one-to-one experiment in public space to prove ways to increase the publicness of the Zuid.Boijmans art space within De Hillevliet building.

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<sup>270</sup> Frearson, ‘MVRDV’s Depot Boijmans Van Beuningen Opens, Giving the Public Access to 151,000 Artworks’.

<sup>271</sup> Sholette et al., *Art as Social Action: An Introduction to the Principles and Practices of Teaching Social Practice Art*.



FIG. 5.2 De Hillevliet's creative hub location in Rotterdam South, the Netherlands.

### Research problem

All research steps during the project in Zuid confirmed there was an accessibility challenge that could be tackled by design. The intermediate findings from the observation, analysis and co-creation crystallised into the research hypothesis that public space accessibility follows the stages of liminality and can therefore be conceived as a liminal process. The experiment emerging from these actions was a spatial intervention consisting of artefacts altering the building's accessibility and proposing an alternative way to enter the building. The experiment called *Limen* invited citizens to playfully enter the building through a shortcut in the urban grid connecting exterior and interior public space (Fig. 5.1, 5.3). The intervention was expected to increase the publicness of the interior public space of De Hillevliet – a community space for culture & society – and especially the rooms of Museum Boijmans van Beuningen by attracting citizens to enter and eventually interact with each other, with the space and with the art. The experiment was performed during the open day of De Hillevliet – on Saturday, October 15<sup>th</sup>, 2022, between 11 and 17h in South Rotterdam (Fig. 5.4).



**FIG. 5.3** Entering the building through opposing windows creates an urban shortcut. Instead of proposing a crossing route, the intervention draws people in and invites them to stay in the building.

### Experiment

The Limen experiment proposed a spatial intervention with specific research objectives. First, during citizen observation it became clear that the building stood in the way of local walking routes. Therefore, the spatial intervention introduced a shortcut in the urban fabric by crossing the building right through (Fig. 5.10) Two identical artefacts bridged the building's envelope through the windows and connected through a 100-meter-long carpet bringing citizens towards the centre of the building (Fig. 5.12). The artefact consisted of two parts: an outdoor stair and an indoor slide (Fig. 5.13, 5.14). On the outside, a linear carpet guided citizens towards a stair climbing the façade through a window (Fig. 5.11). In the window, at the building envelope, a stair plateau led towards a slide immersing in the middle of a space. The artefacts attempted to alter how citizens accessed the building by embodying the concept of spatial liminality and the distinct phases of a rite of passage: separation, transformation and reintegration.<sup>272</sup> First, the carpet enlarged the building's threshold and attracted citizen's attention (separation) (Fig. 5.15).

<sup>272</sup> Van Gennep, *The Rites of Passage*.

Then citizens climbed the stairs and continued the separation stage breaking their private (Fig. 5.9) and starting to engage in public life. At the top of the stair, the plateau marked a tipping point, a point of no return, before the slide (Fig. 5.17). At this point, in a stage of transformation, citizens were expected to stop and reflect by becoming aware of their new reality as public beings (Fig. 5.18).

### Data Collection

During the experiment, research assistants observed and noted citizen's reactions to the spatial intervention both on the inside and outside of the building's façade (Fig. 5.16). Observation was expected to either confirm or deny a relation between the liminality process stages and public building accessibility. To ensure objectivity, the observers were not involved in the conceptualization or design of the spatial intervention. In this way, they could take personal distance from the design and potentially be more objective noting the interactions happening with the artefact. Moreover, the observers were not aware of the hypothesis' specificities to avoid a confirmation bias.

Two main types of data were collected: demographic and behavioural data. The demographic data was organized according to the apparent observed variables: age group (children, teens, adults, elderly) socialized gender and minority background. The expected interactions with the artefact were recorded according to the level of engagement:

- A **Visual impact:** citizen observes artefact
- B **Interest:** citizen approaches artefact
- C **Engagement:** citizen approaches artefact and interacts with it (touching, reading)
- D **Partial Interaction:** citizen climbs stairs or looks inside the building
- E **Complete Interaction:** citizen slides into the building through the artefact.

The extensive citizen observations logged behavioural actions using verbal and graphical tools over underlaid drawings of the building and a table for quantitative data. Notes and drawings included the comments, trajectories and non-verbal interactions explaining the citizen behaviours with the different objects in and around the spatial intervention (Fig. 5.19-5.23). Using the collected data, the researcher/ designer performed a detailed analysis of the demographic, observational and behavioural data to extract results. The results clearly confirmed there is a parallelism between the liminality stages and public building accessibility that could inform design approaches for interior public space.

The limen experiment showed that the behavioural patterns observed in response to the spatial intervention correspond with the stages of liminality: separation, transition, and reintegration. Considering accessibility to public buildings as a liminal process

helps build a nuanced understanding of the potential for architectural interventions to influence and shape public life. Unfolding these findings can offer a framework for architectural design considerations and recommendations to improve public building accessibility that blur the climatic division of exterior and interior public space and the professional division between urban design, architecture and interior design.

### 5.3.2 **Tracing the Spatial and Behavioural Dynamics of Liminal Publicness**

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The experiment examined the impact of a spatial intervention on the accessibility of interior public space, focusing on three factors: demographic characteristics, liminal stages, and the experimental methodology. Through observation and its analysis, the study sought to clarify how user demographics and behaviour were connected to the spatial intervention's effect on publicness.

#### **Demographic Characteristics**

An examination of the data reveals valuable insights into the composition of citizens who engaged with the spatial intervention. First, the spatial intervention produced a significant amount (416) of interactions of different degrees. A discernible trend emerged with age: adults primarily engaged in passive observation, while children tended to use the artefact actively. Remarkably, children accounted for 60% of all artefact users (Fig. 5.5). A sizeable portion of engaging children were found to have an apparent migration background, which coincides with the neighbourhood demographics.

In contrast, gender had little influence on slide use patterns. Furthermore, a pronounced spatial disparity was observed, with the art space on the East side showing higher levels of citizen engagement than the artefact in the West (cafeteria) area. This shows differences in the urban embeddedness and publicness of the two sides of the building.

#### **Liminality Stages and Behaviours**

The exploration of liminality stages shed light on distinct behavioural patterns exhibited by participants as they transitioned from private to public engagement. During the separation stage, citizens were visually affected by the bright green coloured artefact. They showed early interactions, such as stopping to observe it from a distance, expressing intrigue, and approaching it with interest. Once in contact with the artefact during the transition stage, users showed varying reactions, such as waiting for others to act before engaging, expressing frustration with

navigating the artefact, seeking support and reassurance, or repeatedly using the artefact. Finally, at the reintegration stage, users showed even clearer behaviours, encompassing expressions of satisfaction and dissatisfaction, as well as providing advice or critique based on their experience.

The experiment yielded an array of observations around the spatial intervention. The following observed behaviours or displayed actions are linked to the liminality stages– separation, transition, and reintegration– in the passage from private individuals to engaging in public life.

#### **Separation: from the visual impact to the first contact with the artefact**

- Distancing: stopping to observe the artefact from a distance.
- Intrigue: “What is this?”
- Anticipation: approaching the slide attracted by activity on the other side.
- Noticing: perceiving the artefact as a distant sculpture.
- Curiosity: observing from moving cars, bikes or walking the dog.
- Interest: entering to ask about the artefact, approaching it and leaving.
- Fear: slowly approaching it, some children even crying.
- Contact: touching the artefact.
- Doubt: “Do I fit?” “Will it hold?”
- Retreat: going back down the ladder after climbing it.
- Admiration: taking pictures with the artefact.
- Impatience: running towards the stair.

#### **Transition: Engagement and interaction with the artefact.**

- Sequence: waiting for somebody to do it to go after.
- Frustration: not being able to leave the building through the slide, “How do I go out?”
- Support: seeking reassurance to proceed with the climbing or sliding.
- Culmination: pausing on top of the slide. “King of the world” moment.
- Appreciation: “This is cool!”
- Alteration: climbing the slide instead of the stairs.
- Repetition: using it multiple times, “If you dare once, you dare again.”

#### **Reintegration: Exit and Guidance after using the artefact**

- Satisfaction: expressing evident joy during/after using the artefact.
- Confusion: “Where am I now?” “Do I have to sign up?” “Do I have to pay?”
- Movement: using the carpet as a running lane between slides.
- Engagement: talking about the artefact after using it
- Gathering: forming groups around the artefact on the carpet.
- Advising: “Better use two pillows at the bottom.”
- Critique: “Is too high for adults.”



FIG. 5.4 Once inside, the public interior offered activities for citizens to stay. Art workshops, music, exhibitions etc. were expected to invited them to participate in public life.

## 5.4 Liminal Transitions and Public Building Accessibility: Insights from a Spatial Experiment

---

Demonstrating the liminal process of accessing a public building through a slide-based artefact clearly showed a parallel between the theory of liminality's stages of separation, transformation and reintegration and a public building's visitor's transition between outdoor and indoor public spaces. The research hypothesis was that liminality stages could be extrapolated to accessibility in public buildings. During the four hours that the experiment lasted, there was a clear increase in the interest and interaction of citizens with the building (416 interactions). Since the data was collected during a special open day event on a Saturday, it is impossible to compare it with a regular day. Yet the number of participants in the activities was considered higher by organizers compared to previous editions. We can conclude that the spatial intervention influenced the visitor's increase and therefore activated the publicness of the interior public spaces of Zuid. Boijmans van Beuningen in De Hillevliet.

The demographics observed during the experiment confirmed the intuition that the slide would more likely facilitate accessibility for younger citizens. Children were the focus group of the Zuid.Boijmans art space so the choice for a slide consciously limited the involvement of adults in the experiment yet it invited them to incorporate playfulness in the urban experience. A physically demanding transition such as a stair with a side does impede access to the building to determined community groups. Data showed it was mostly children who used the slide (Interaction E - 60%), while most adults observed it (Interaction A - 66%). Collected data also confirmed the diverse cultural background of the surrounding community: 31% of citizens interacting with the artefact had an apparent migration background. Surprisingly, the slide's physical demand did not seem to influence the gender of users: there were similar amounts of women and men having a full interaction (E) with the artefact by using the slide (59 vs 58). This might be due to two reasons: children tend to have fewer gender restrictions when it comes to physical activity in public space and most women using the slide were accompanying their children. Finally, the numbers of citizens interacting with the artefact also confirmed the urban analysis: there was a clear difference between the interactions on the building's side towards the shopping high street compared with the side towards the water canal due to its visibility. We can therefore state that public accessibility is clearly defined by the access positioning and visibility in the urban fabric.

While the range of user reactions to the artefact's experience reflect user diversity and individual differences, it also shows general trends proving the relation between liminality stages and public space accessibility. Observed behaviours during the separation phase confirmed that public building accessibility challenges traditional professional definitions since liminality stages cross exterior and interior public space. The separation stage starts in urban design's realm, then the transformation happens along the building's envelope designed by architecture and then the reintegration phase is defined by the design of the interior public space. Therefore, public space's experience of the building does not start or end with the building envelope (the architecture) but starts when the building is perceived (the urban space) and ends with the interior experience (interior design). In the experiment, the most recurrent interactions were visual impact on street by-passers (25% of all interactions), confirming that public building accessibility design must consider the building's perception from a distance and not only design the threshold at the façade or envelope's boundary. Placing elements beyond the façade marks the beginning of a threshold towards interior public space. In the experiment, extending the carpet towards the street and placing text readable from afar were meant to extend the threshold and facilitate the liminal transition.

Once citizens were on the artefact –in the transition phase– they engaged with the artefact without unaware or where it was leading. When becoming aware of the transition they were undergoing, citizens had different reactions such as doubt and uncertainty, needing to reflect and pause, seeking reassurance or feeling decisive and trusting the transition (Fig. 5.3). The artefact design was meant to accompany them in the transition while also leaving space for unexpected reactions such as confusion, reflection and even frustration. Forcing citizens to undergo such a transition through the artefact visibilised affordances and reactions proving a parallelism between liminal stages and public space accessibility.

At the end of the interaction with the slide, citizens entered the reintegration phase. At this point citizens showed different reactions such as looking back, staying put or looking forward. Some stopped to reflect on the transition, others felt disoriented and needed more clarity on how to proceed while others moved directly towards the next action without hesitation. Such behaviours show that the inner side of the threshold between outdoor and indoor is a sensitive point for design to guide the accessibility process. Users demanded design to support their landing by providing clarity and guidance. In other words, after accessing a building, the reintegration of citizens into interior public space must be considered and designed for. The point between accessing a building and engaging in public life is a vulnerable point where visitors may lose interest, direction or even retreat outside. From the experiment,

some material and immaterial aspects appeared as possible approaches to support the reintegration into public space, such as having a host person receiving visitors, placing wayfinding signs or designing pavements guiding directions.

As previously discussed, the current experiment had limitations that can also be interpreted as unique strengths. The researcher/designer coordinated the design process in a co-created manner with the stakeholders trying to incorporate their inputs which led to design decisions being negotiated and altered to accommodate reality. For example, the green colour was chosen by price and contrast with the building's logo and not out of aesthetic conviction. Also, the shape of the artefact was adapted together with the builders to fit in the budget. Another example of reality adaptation is that because of the weather conditions on the day, the carpet at the main entrance was not placed. It must also be noted that this experiment was part of a research assignment funded by the Boijmans van Beuningen Museum and coordinated by the author who was taking a double role of designer/researcher. Such limitations ground the experiment in reality and make it more comparable with actual design processes.

In any case, the experiment also confirmed the validity of spatial interventions as an experimental method. The richness of the results shows that spatial experiments can be a reliable method to confirm theoretical hypotheses. Yet it could be argued whether an experiment with such a brief time-span and specific physical involvement can provide universal answers. Given the clarity of results and the level of abstraction of the conclusions, it can be presumed that similar experiments would grant similar conclusions even through distinctive design approaches. The findings of this experiment show promising advancements for public building accessibility design and show the potential of spatial intervention as an experimental tool in public space research.

## 5.5 Rethinking Public Building Design Through Liminal Accessibility

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The current case has shown that liminality offers an interesting lens to rethink the design of public space, shifting attention from static definitions of interior and exterior public space towards dynamic, transitional experiences. It reasserts liminality's significance as a conceptual framework for interior public space accessibility. The Zuid. Boijmans experiment proved that the public experience in interior public space can be conceptualized as a threshold between private life and the public sphere following the stages of a liminal experience: departure, transition and reintegration. Unfolding parallel to the urban, architecture and interior design domains, these stages point towards integrated public space design challenging fixed disciplinary boundaries based on interior-exterior climatic divisions.

Findings suggest that focusing on liminality, rather than simply on interior public space accessibility or visibility, allows designers to better understand and shape the conditions under which publicness emerges. The experiment showed the power of design to influence publicness through specific interventions, demonstrating that publicness can be intentionally shaped rather than appearing as an uncontrolled design side effect. In this way, the productive ambiguity of the liminal—its uncertainty, fluidity, and openness—creates opportunities for transformation, inclusion, and new forms of belonging. Ultimately, embracing liminality in public space design opens new possibilities for creating environments that support collective belonging, shared agency, and richer public life.

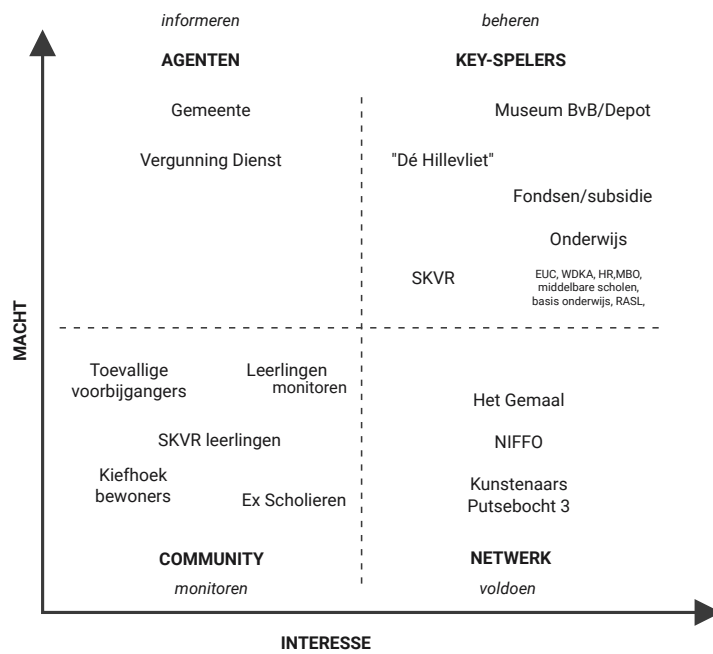
Recognising the public space experience as threshold in a space of negotiation between inclusion and exclusion highlights the need for more fluid, citizen-centred approaches to public space design. It also raises questions about whether the tools and approaches currently used by designers are sufficient for transdisciplinary public space design. Embracing liminality encourages a more dynamic understanding of boundaries that challenges fixed categories of interior and exterior, public and private, urban and architectural.

Previous chapters have explored how co-creation can be the departing point for public space design approaches focusing on citizens and community life. Experiments such as the one at hand propose new design approaches to intervene in public space focusing on the collective to increase publicness, inclusiveness and belonging in urban environments. Moreover, this chapter contributes to broader practical debates on how designers can engage with transitional conditions in public space within late modernity's context of continuous change. However, more research on liminality as a conceptual framework for interior public space accessibility could bring deeper understanding on the mechanisms of the transition and how design can participate in it. Given the situated nature of the experimental approach, the repetition of similar experiments in different locations could further probe the hypotheses and findings. Such investigations could open new directions for exploring underexamined aspects of public space design.



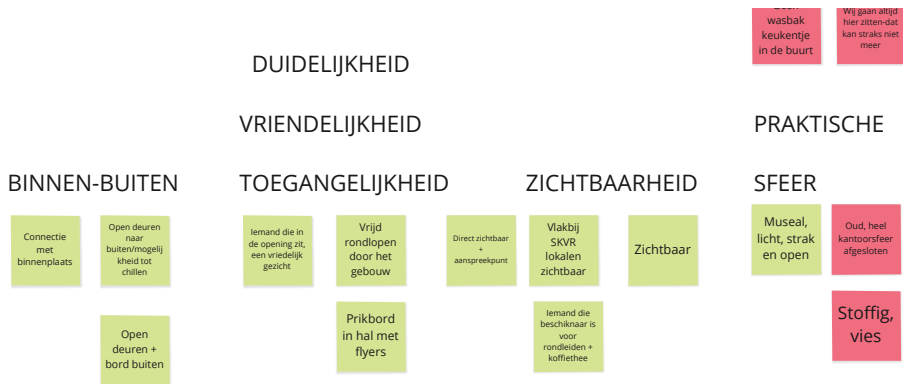
FIG. 5.5 Children lined up to climb the stair leading to the slide. Through repetition and iteration, children presented new ways of using the artefact and produced very valuable data confirming the experiment's validity to test public liminality.

## ACTOR NETWORK



**FIG. 5.6** Results of the collective creation session with stakeholders. Actor network analysis, spatial diagnosis and finally translating that into a spatial identity forming the starting point for the spatial strategy design. More on the collective creation approach in Chapter 4.

# DIAGNOSIS



# SPATIAL IDENTITY



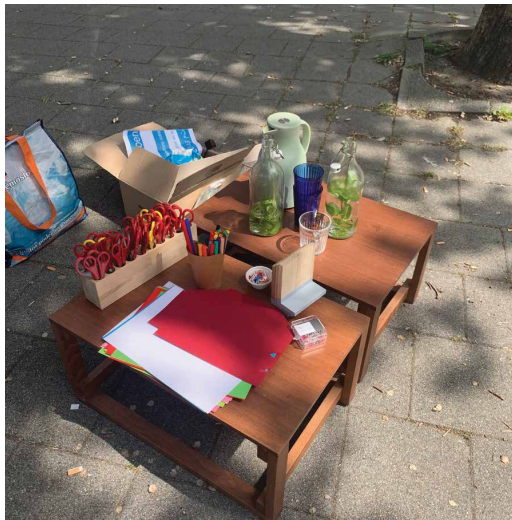
# DIAGNOSIS

## BG



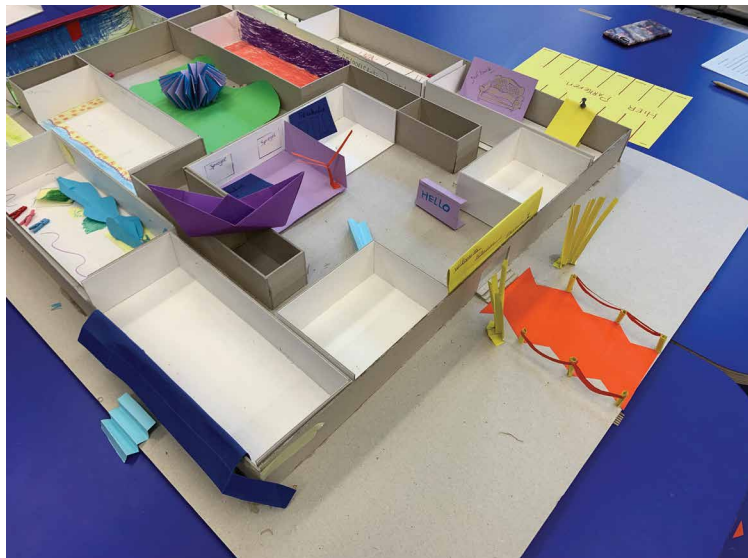
# 1



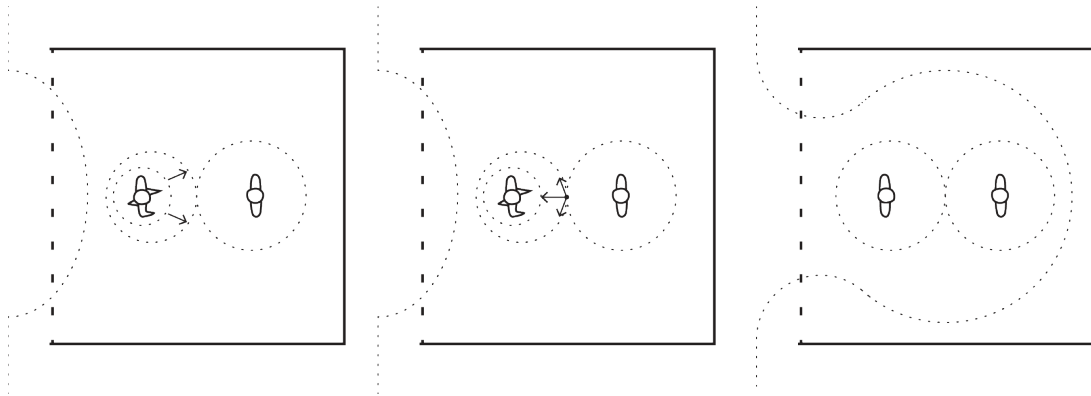
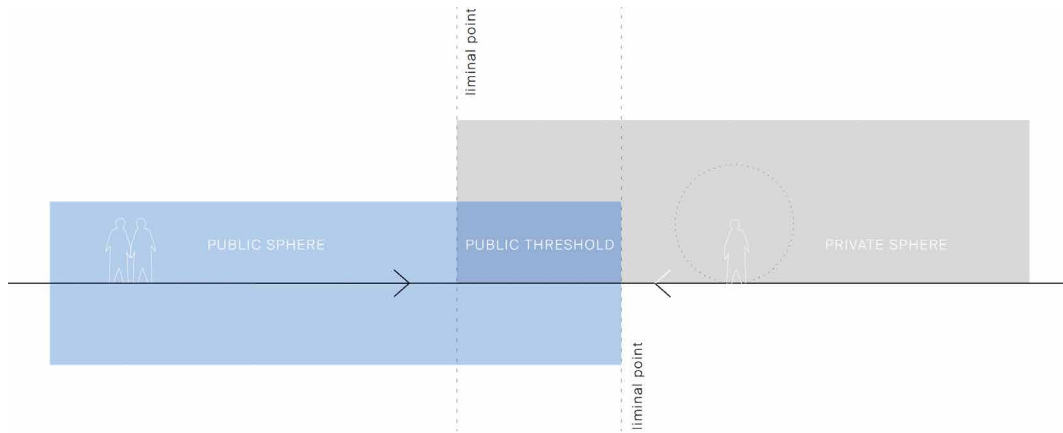


**FIG. 5.7** In June 18th 2022, a collective creation activity took place in front of de Hillevliet. Citizens were prompted to stop and respond: “What would you do in a museum?”, being offered tea and sweets and children were invited to make a model of an ideal art space.

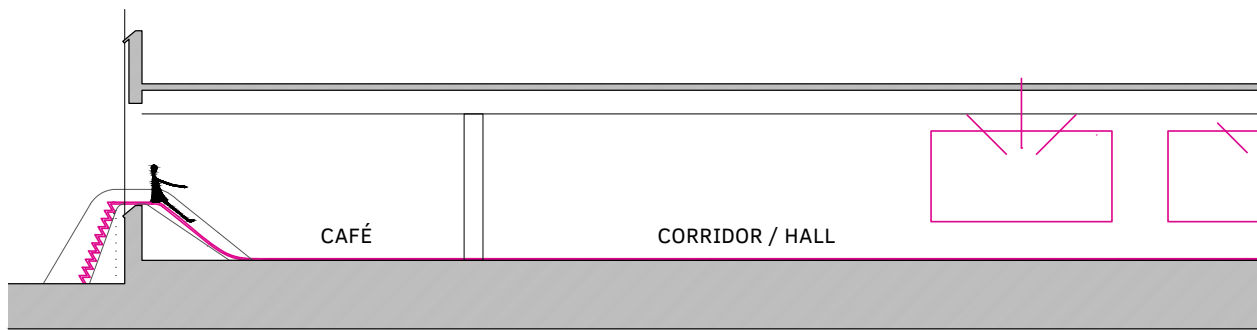




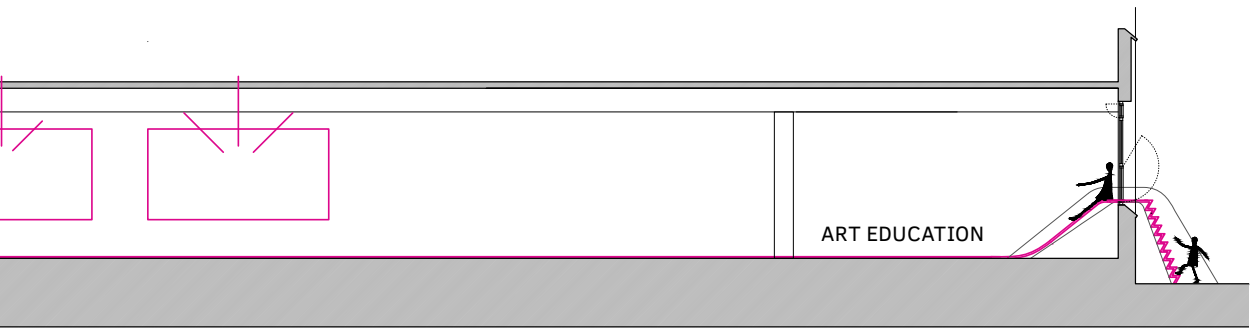
**FIG. 5.8** Model making appears as a great tool to engage citizens, especially when language is a barrier. In this occasion, refugee students explored how to make the building more accessible.



**FIG. 5.9** Conceptualizing Sloterdijk's theory of spheres through drawings was the starting point of the limen hypothesis. Drawing is a design tool that helped ground the theory into spatial terms.

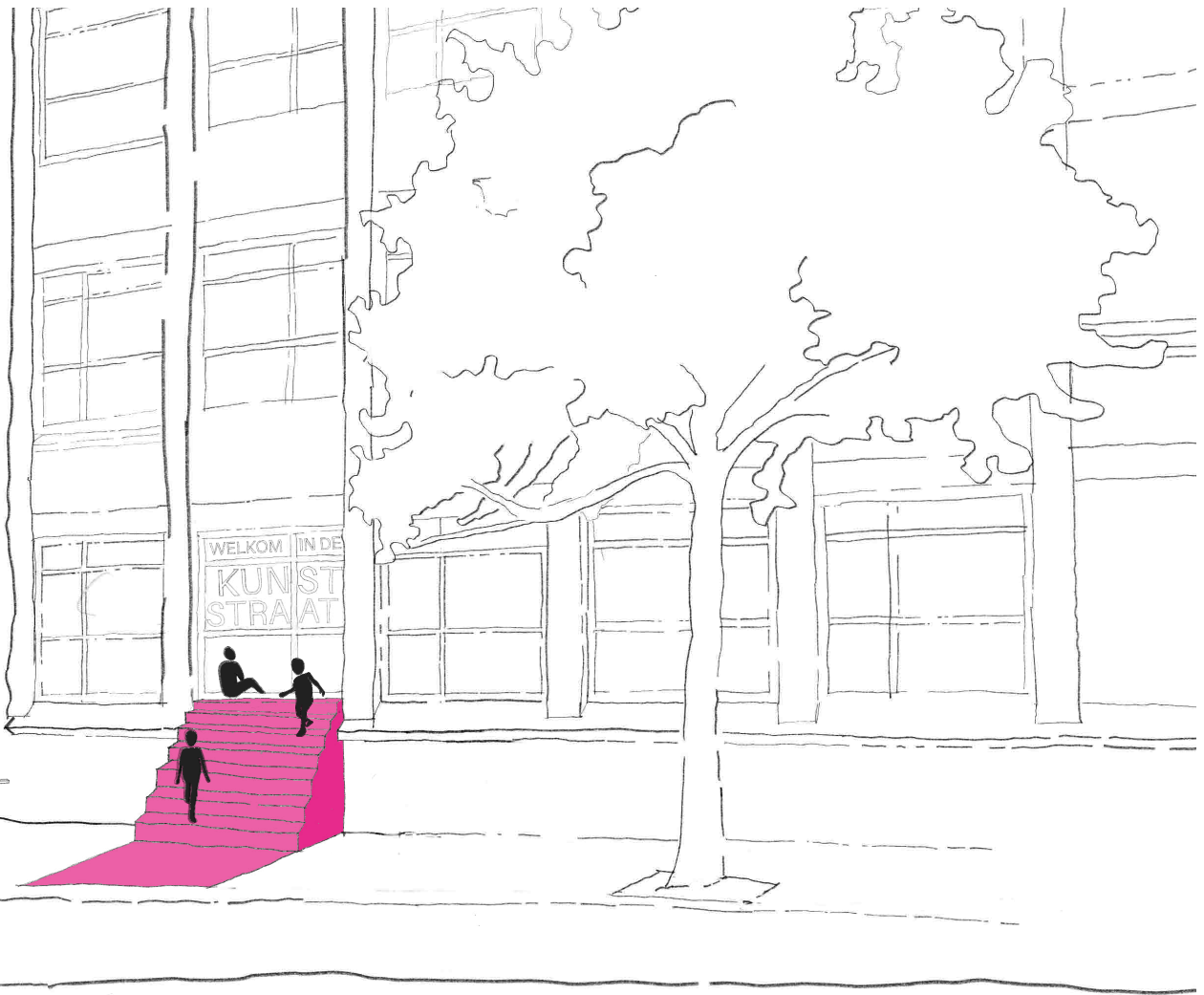


**FIG. 5.10** Early proposal of the inner street crossing the building through the windows. Two opposing slides connected by a carpet lead visitors toward a central exhibition in the entrance hall.



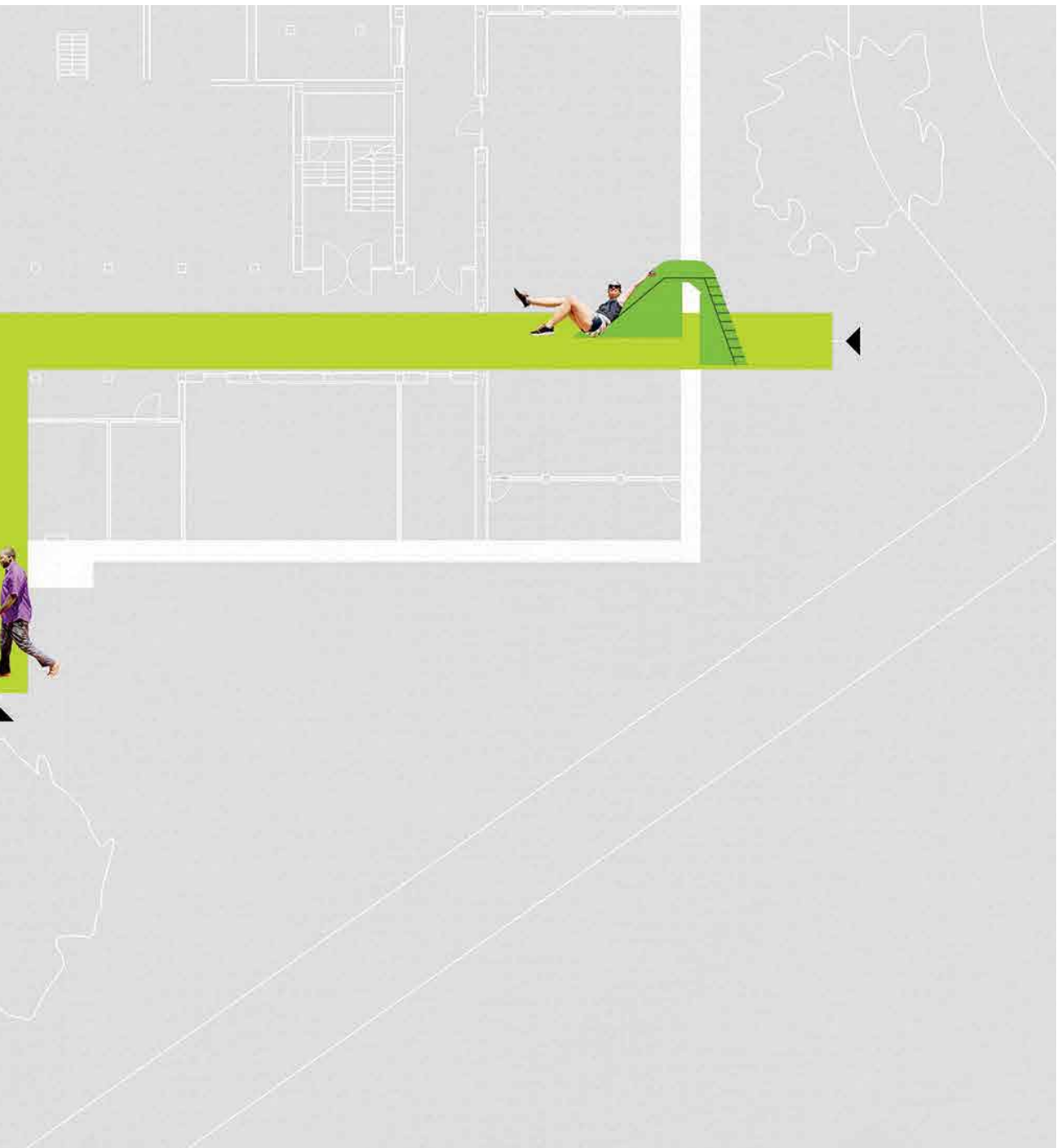


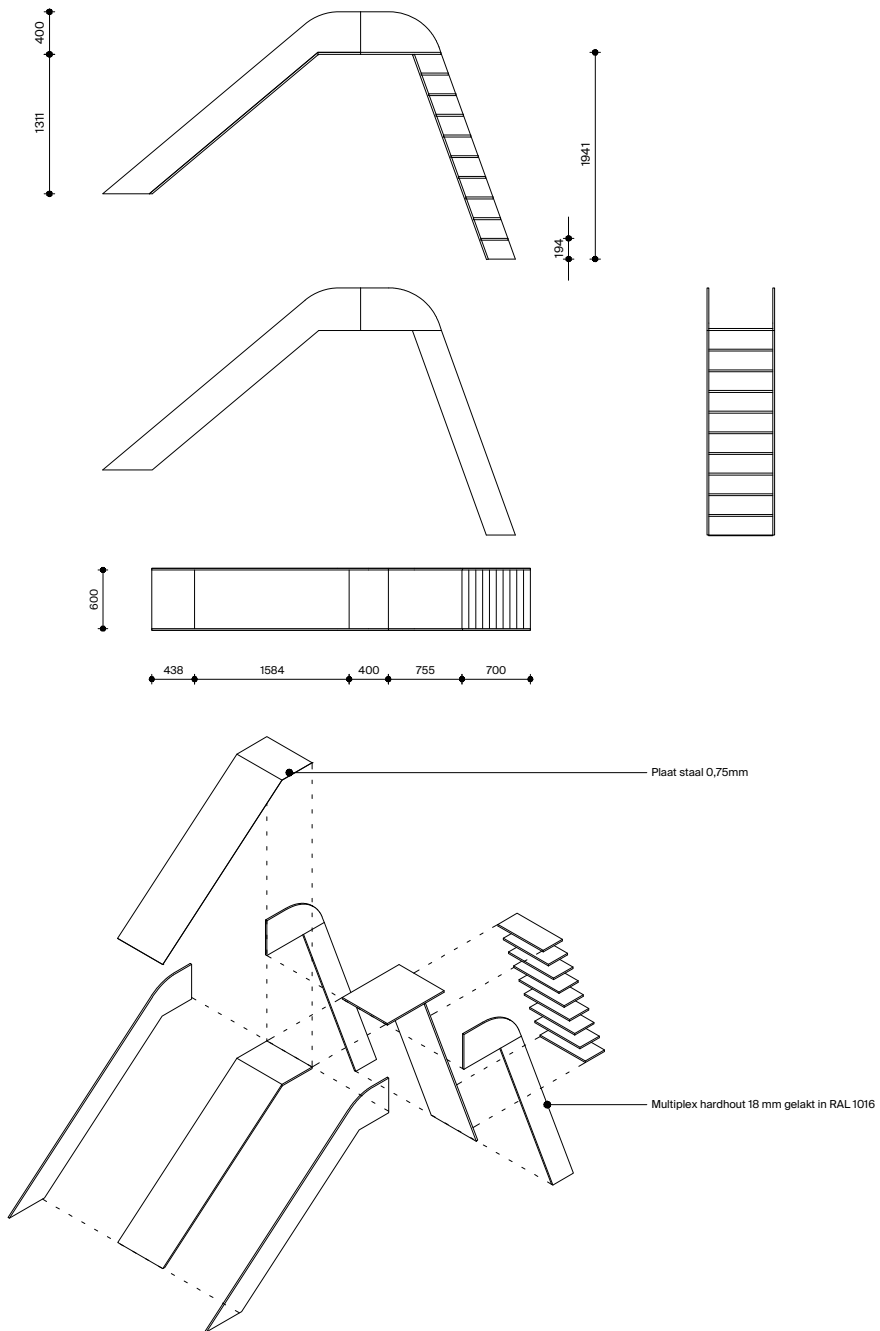
**FIG. 5.11** From the outside, a colourful stair leading to a window extends into the street. An unexpected object with a bright colour offers an unexpected affordance: to enter a building through a window.





**FIG. 5.12** The spatial intervention proposed an inner street crossing the building's entrance hall accessed through two slides in opposing windows and connected by a colourful carpet extending into public space.





**FIG. 5.13** The main artefacts, the slides bridging the windows, were designed by the author but executed by the technical museum team. Final detailing and colour was adapted and negotiated along the process.



**FIG. 5.14** Slides were made out of wood and varnished in the same hue as the bright green carpet. The conspicuous bright green colour was a contingent decision by the building managers based on the available affordable carpets.



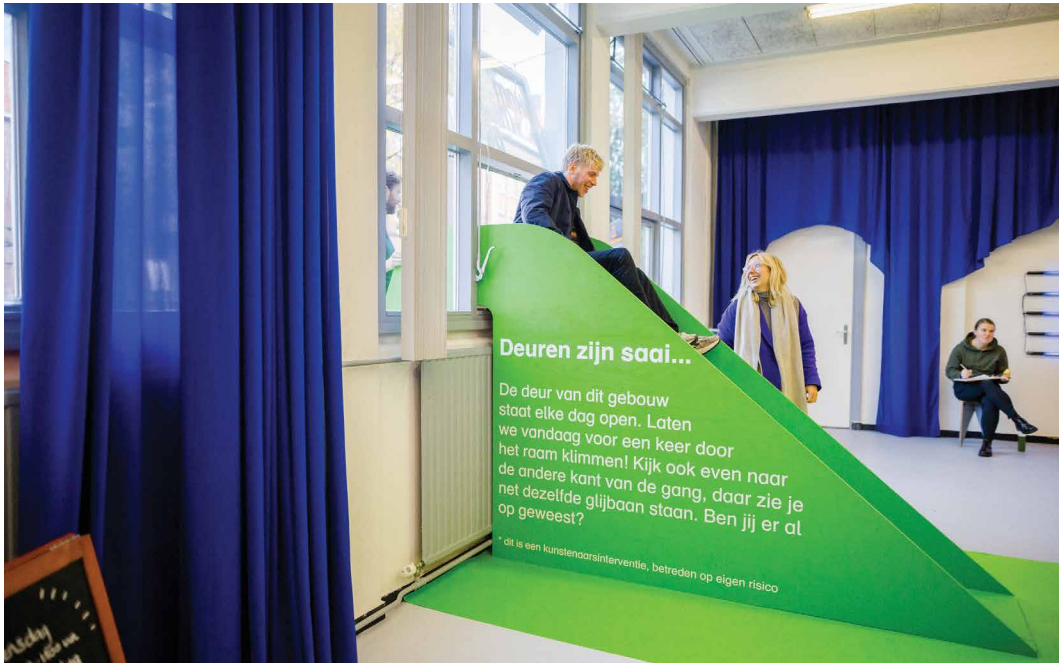
**FIG. 5.15** During a grey rainy day, such a bright colour broke the monotonous landscape raising citizen's curiosity and attracting them to get closer to the building. Blurring the façade with an artefact that offsets the public threshold towards the city.



FIG. 5.16 From a distance, observers noted behaviours around the artefact. The most recurring one were children climbing the ladder and sliding into the building in all possible ways: head-first, in couples, climbing the slide etc.



**FIG. 5.17** At the top, at the tipping point between the ladder and the slide, citizens stopped to reflect and notice the public life around.



**FIG. 5.18** Most citizens decided to slide into the building and either engage in the activities or continue through the inner street. Some turned around and did not slide, overwhelmed by public life.

# Research Protocol

Limex Experiment | Zuid.Boijmans van Beuningen | Rotterdam NL | 15.10.22

## 1. Rationale

The process of engaging in public life is a liminal process, a transition from private individual to public actor. This process instead of being defined by opposing concepts: indoor-outdoor, private-public is defined by a threshold. Cultural buildings, and especially the ones being adapted and re-used, often struggle to accommodate the liminal process of public life. This experiment explores how the public condition of De Hillevliet Community Centre in Rotterdam Zuid (the Netherlands) can be strengthened through a spatial artefact offering a low-threshold way to interact with the cultural building: creating a shortcut in the urban fabric by letting citizens slide into the building through the windows.

## 2. Objectives

Testing in what ways the placing of a spatial artefact altering the public condition of the façade of a cultural building affects the behaviour of passing citizens. Ultimately understand their: needs, experiences, behaviours (see 4: expected outcome) and goals.

## 3. Methodology

- A. Observation
  - a. Mapping with words and drawings the physical movements and behaviour of passers-by.
  - b. Counting and identifying their reaction to the artefact according to their apparent socialized personas<sup>1</sup>.
- B. Analysis
  - a. Connecting the graphic and numerical data
  - b. Interpreting the results
- C. Variables
  - a. Age Group
  - b. Socialized Gender
  - c. Interaction with artefact

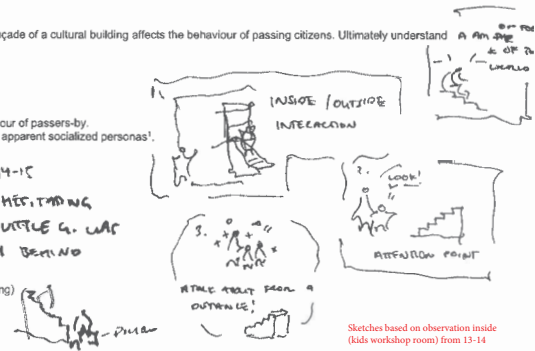
## 4. Expected outcomes

- A. Visual impact: citizen observes artefact
- B. Interest: citizen approaches artefact
- C. Engagement: citizen approaches artefact and interacts with it (touching, reading)
- D. Partial interaction: citizen climbs stairs or looks inside the building
- E. Complete interaction: citizen slides into the building through the artefact.

## 5. Data management and analysis

Data will be collected on paper during the hours when the experiment takes place. It will later be scanned and digitalised for analysis

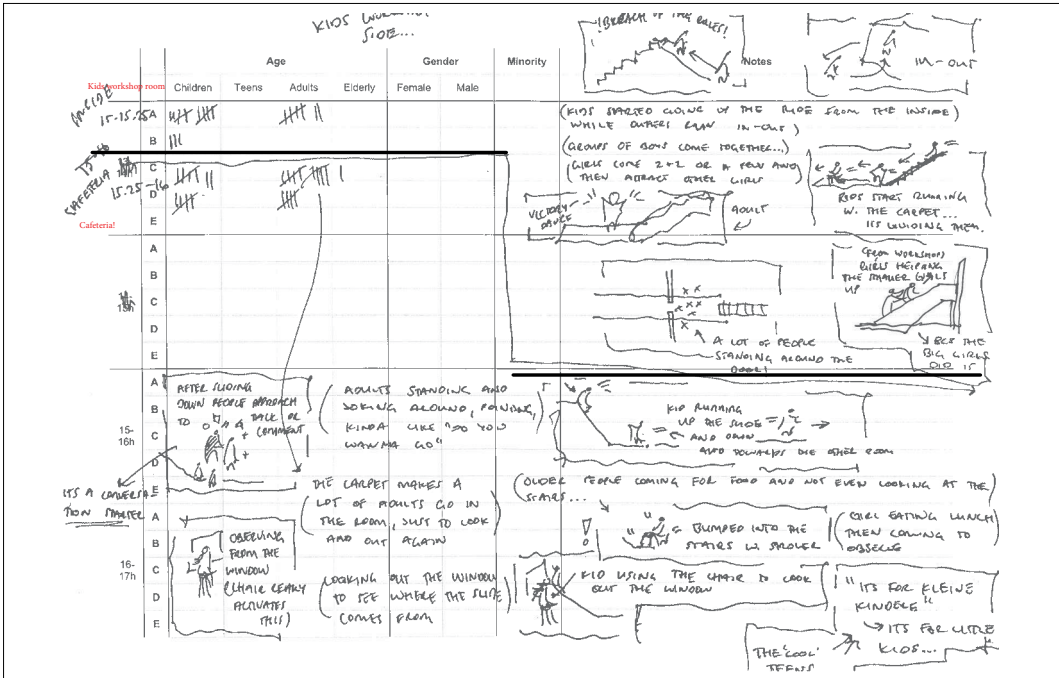
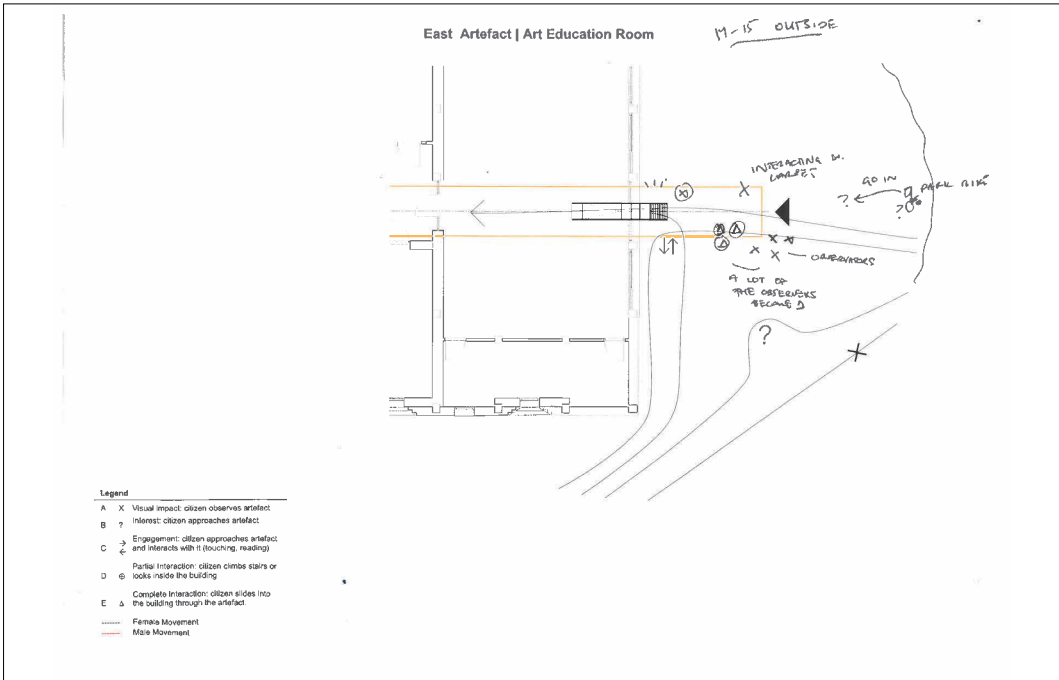
<sup>1</sup> Persons: "a social role", or "outward or social personality" (etymology, 1917) which comes from psychology... "The mask or appearance one presents to the world" [J. Jung (1928) "The Relations between the Ego and the Unconscious"]



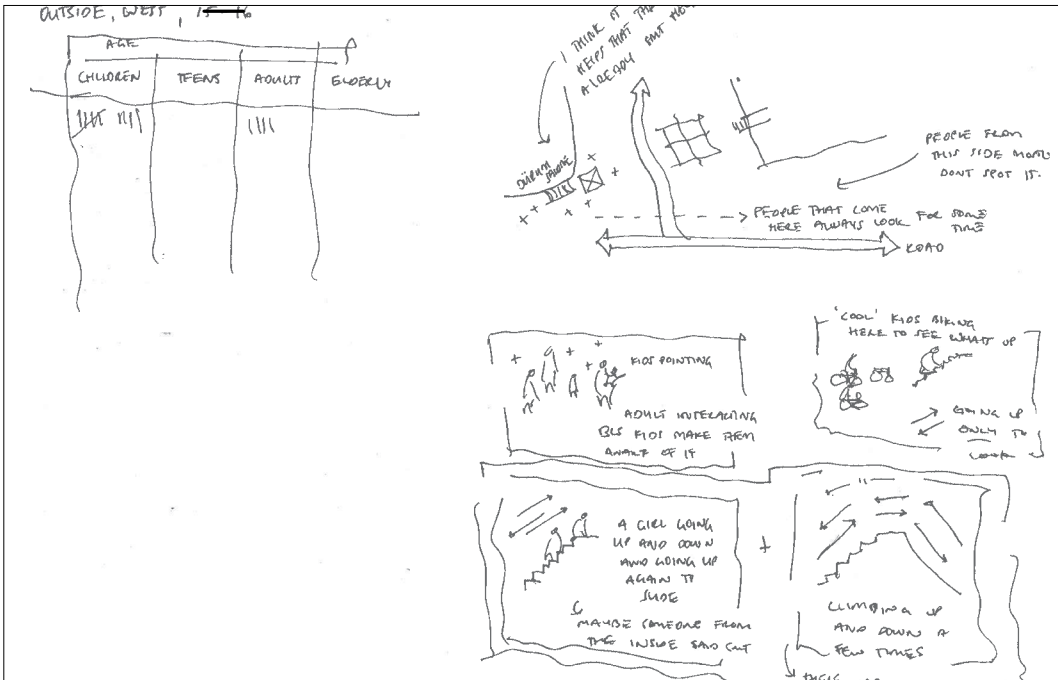
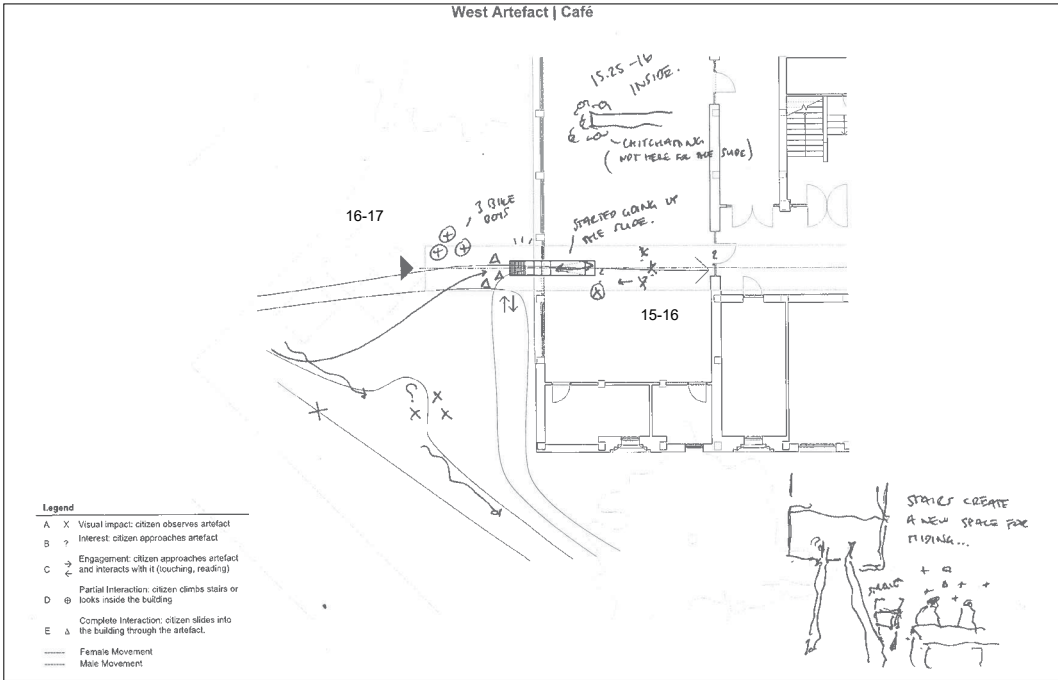
Sketches based on observation inside (kids workshop room) from 13-14

INSIDE, GIGETA		Age				Gender		Minority	Notes
		Children	Teens	Adults	Elderly	Female	Male		
13-14h	A								6 POINTS AT STAIR AND MALES HER. ONE MALE OF 10MINS... (TEENS OBSERVING AS FORS EXPRESS TALKS...)
	B								(A GROUP OF CHILDREN APPROX AND OBSERVING, WHOSE TALKING TO EACH OTHER - BUT DON'T COME CLOSER, STAY IN THEIR CIRCLE)
	C								TWO ADULTS WALKING THROUGH BUT TURNING AROUND (EISELN WOULD APPROACH STAIRS TO LOOK OUT THE WINDOW)
	D								(A GROUP OF 10-12) → REACH THE TOP AND LOOK AROUND → BRACK APPROX THEM AND TOWARD THE MUSIC!
	E								EISELN COMES OBSERVE AND POINTING
14-15h	A								(TWO CHILD ARE SITTING APPROXIMATING)
	B								(VOLUME BEING HIGH FOR TO TRY)
	C								(THE SOUND ON THE WAY THROUGH)
	D								(A GIRL RUNNING W. THE TEACHER)
	E								(A LOT OF PEOPLE COME INTO THE ROOM TO LOOK AROUND AND THEN EXIT TO GO)
	A								(A GROUP OF CHILDREN APPROXIMATING W. MALES AND THEN COMING UP STAIRS WITH A BIG "HALLOO" ON TOP AND THEN COMING BACK INSIDE) (KID APPROXIMATING APPROX)
	B								YOU HEAR IT → COME TO THE STAIR AND GIRL DOWN AGAIN) (TWO COMING FROM THE INSIDE TO STAIRS)
	C								"WILL NOT GO EARLY QUICK" (KID POINT TO MAN WHILE THE MUSIC AT THE CORNER) (IN GENERAL KID DO IT MORE)
	D								PROF. LOVE HANGING FROM THE STAIRS (U. MAN IN THE CORNER)
	E								THE EXAMPLE
	A								IF YOU OBSERVE AND INTERACT
	B								PEOPLE COME FROM THE INSIDE AND OUT WITHOUT MUCH HESITATION
	C								MAKE ABOUT POINT FROM OUTSIDE
	D								KID CLIMBING THEIR PRESENT THEM

FIG. 5.19 Spatial intervention observations from Observer 1



West Artefact | Café



**INSIDE OBSERVATIONS**



Observing from a distance but staying in group



Verbal notice and pointing



"King of the world" moment



Interaction with the outside



The carpet acting as a leading lane for kids to run



The sliding becomes a point of attention between people in the room, spontaneous small talk forms



People enter the room to look at the slide closer and ask about it, before they leave again



The kids started running up and down the slide, instead of taking the stairs after some time



Elderly lady bumps into the slide and seems rather annoyed, she sits next to it after and observes the kids playing



Groups of people form around or close to the slide - all on the green carpet

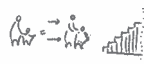
**OUTSIDE OBSERVATIONS**



Running towards the stairs right away



Observing then interacting



Kids drag their parents to the stairs



People are more keen to approach when they see activity 'on the other side'



Kids support each other in using the stairs



'If you dare once, you dare again'. Kids running in loops to go on the slide again and again

		Age				Gender		Minority	Notes
		Children	Teens	Adults	Elderly	Female	Male		
13-14h	D			✓		✓			Did not slide down. Climbed up to Did not slide down. Paraphrasing in case of separating. interested with its existence. Complete excited interaction of so-seems. Attracted to music sound. Parents of kids. One female Ed. Wanted to take the artefact. Walk past but observe. Requesting his mom but she wouldn't let him. Taking pictures.
	C			✓		✓			
	B	✓		✓		✓	✓		
	A	✓		✓		✓	✓		
	E	✓		✓		✓	✓		
14-15h	A								Minority kid of course very hesitant to enter. mother of a kid. They climb up with 2 people Kids using that as the entry to the workshop. Family sliding. Caught with her dress Using the slide for screens. Family sliding. Caught with her dress make part of scene. father standing at son for going inside so many going to the teacher but no interaction with artefact
	B								
	C								
	D			✓		✓	✓	X	
	E	✓		✓		✓	✓		
15-16h	A	✓		✓	✓	✓	✓		half-way "I won't pass through it" not enough head happily running to it like he's aware of it. Father for two child with mother. so many two friends. daughters.
	B	✓		✓	✓	✓	✓		
	C	✓		✓	✓	✓	✓		
	D	✓		✓	✓	✓	✓		
	E	✓		✓	✓	✓	✓		
16-17h	A	✓		✓		✓	✓		One mother forcing kid to use the slide but the kid with boy goes running, touches it, friend calls him back.
	B	✓		✓		✓	✓		
	C	✓		✓		✓	✓		
	D	✓		✓		✓	✓		
	E	✓		✓		✓	✓		
									Father slides before the daughters to build confidence. One child leads, the others follow.

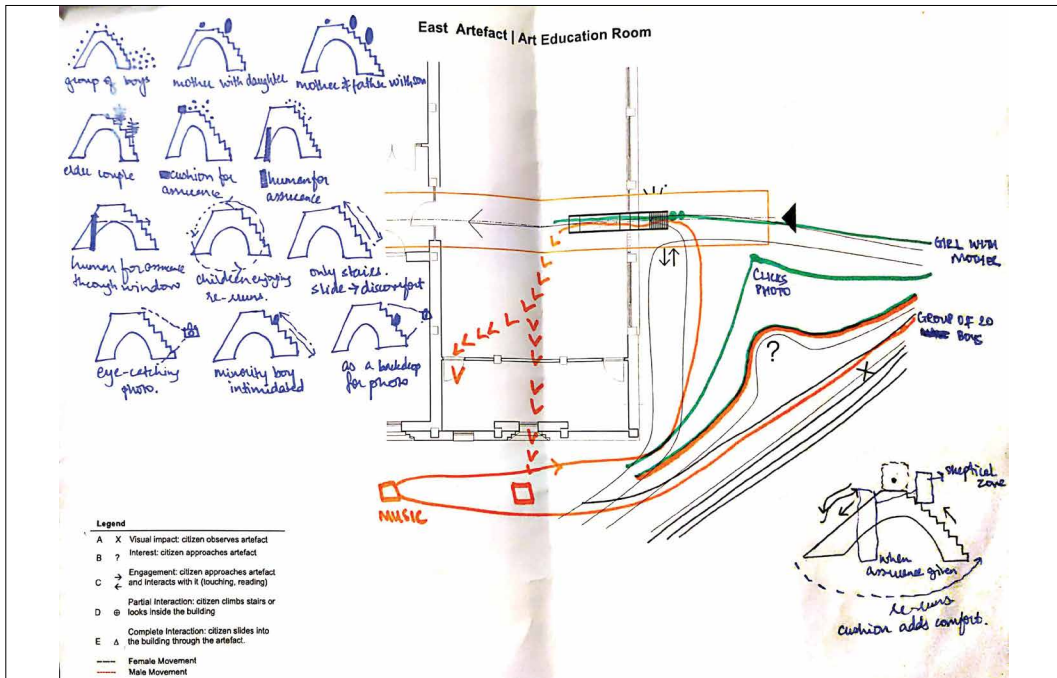
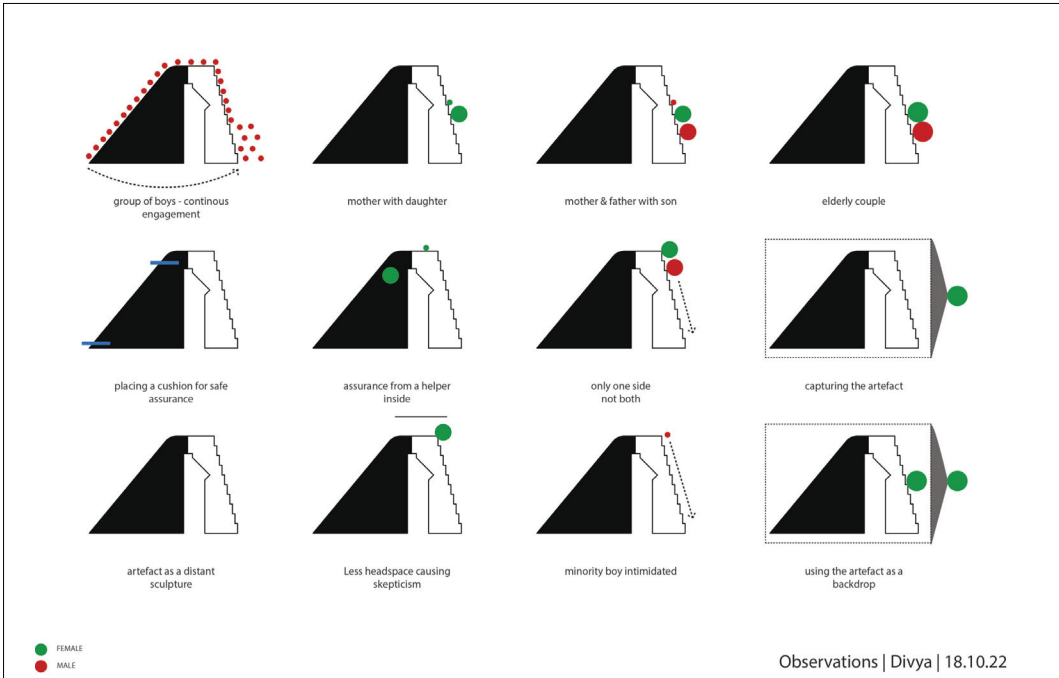
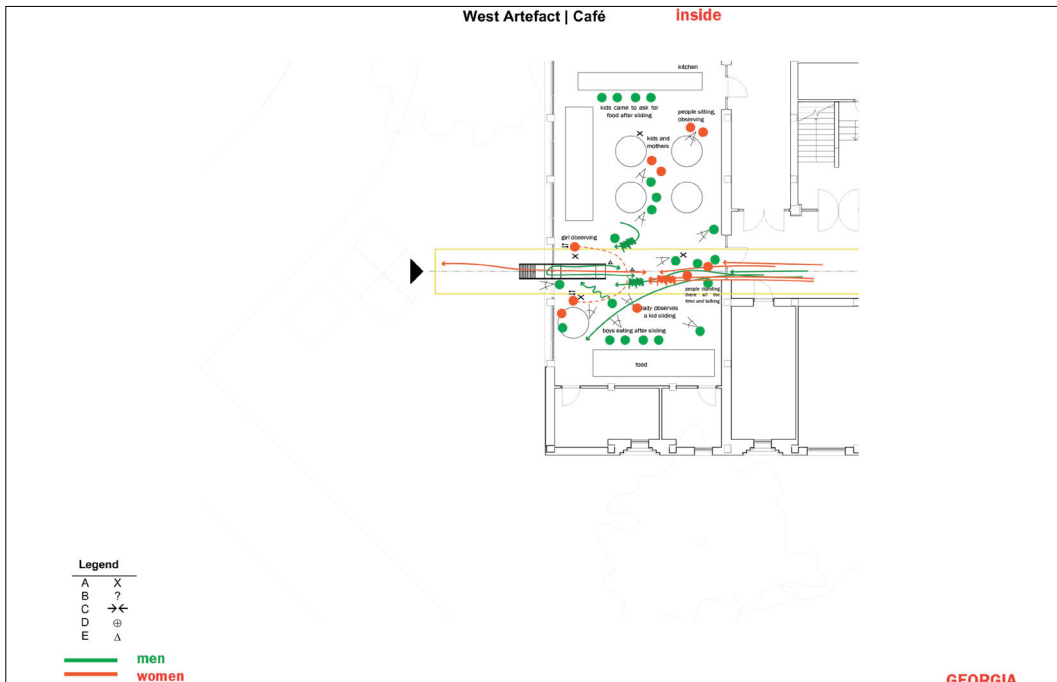


FIG. 5.20 Spatial intervention observations from Observer 2



		Age				Gender		Minorities	total number of people	Notes
		Children	Teens	Adults	Elderly	Female	Male			
east exhibit (next to cafe)	13-14h	A								most of the people are minority, many people pass right next to it without looking at it, most of the people that passed by were men, some bikes observed it, one man approaches, climbs and leaves
	B									
	C									
	D									
	E									
								48		
inside cafe	14-15h	A								most of the people came close to the food / drink after they observed the installation, one man who first looked at it, came closer and touched it, people observe, laugh, read, touch, two girls tried to climb from the slide side, a lot of kids sliding multiple times, most of the kids are minority
	B									
	C									
	D									
	E									
								35		
inside kids activities	15-16h	A								kids sliding multiple times, people took photos of each other climbing (2 mothers, one man), a lot of people were staring from their moving cars, some people ask if they can climb, some other ask if they have to register first, people walking with their dogs observing, some elderly climbed, most of the kids are minority
	B									
	C									
	D									
	E									
								55		
inside kids activities	16-17h	A								most of the kids climb from the inside and then slide, many recurrent people
	B									
	C									
	D									
	E									
								47		
155										

GEORGIA



GEORGIA

FIG. 5.21 Spatial intervention observations from Observer 3



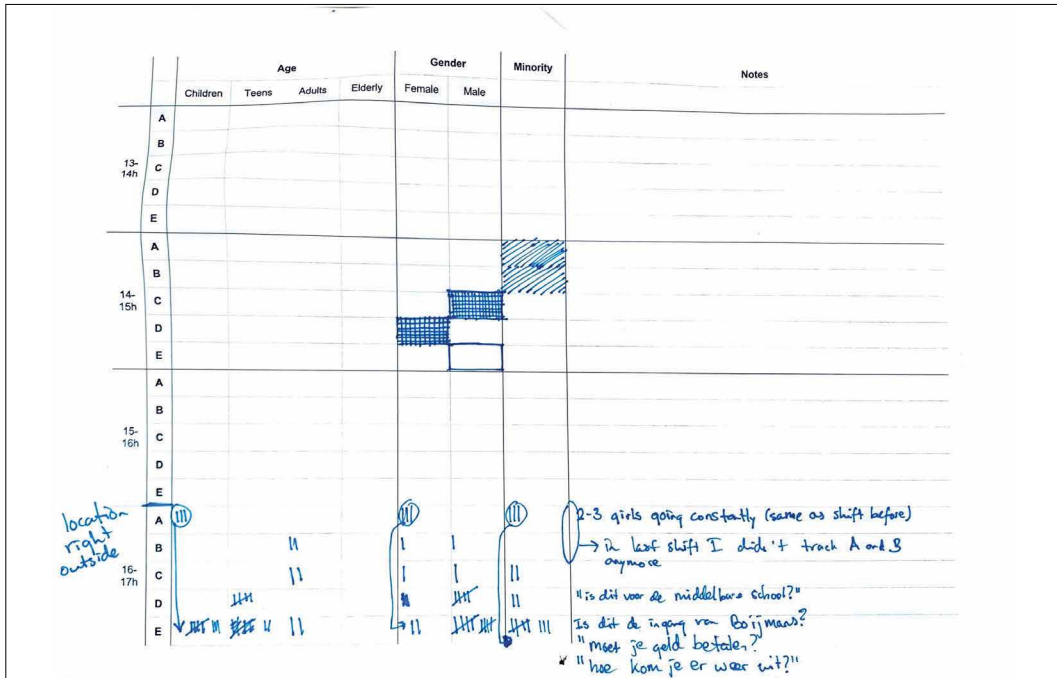
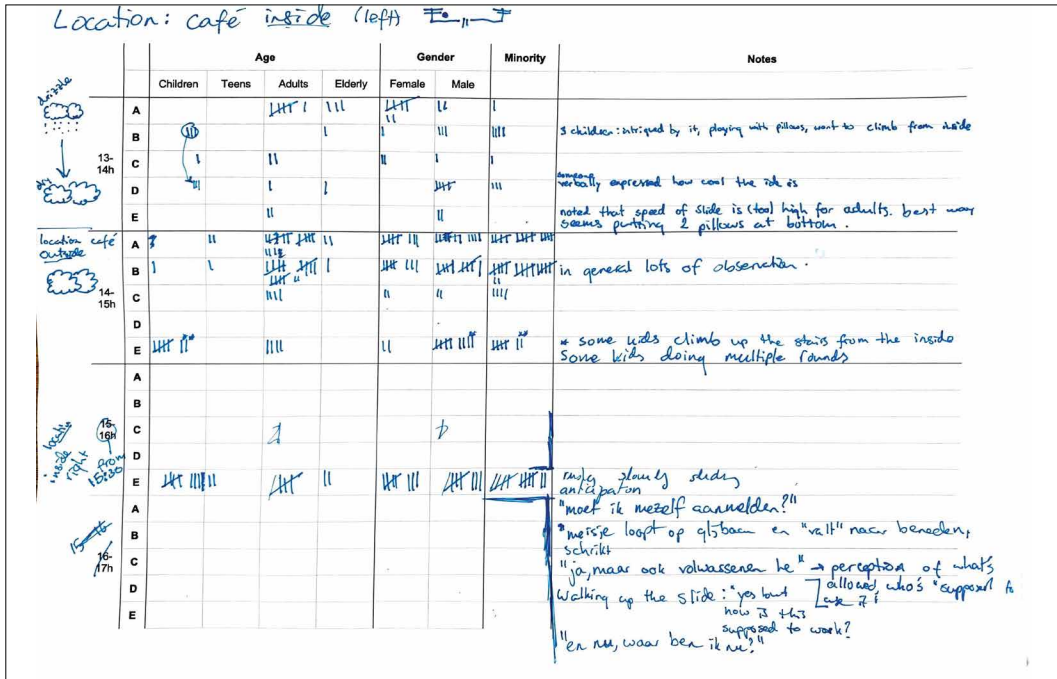


FIG. 5.22 Spatial intervention observations from Observer 4

General observations: (inside cafe)

- even when not used it's a conversation starter (also between different groups)
- from the inside sometimes people want to interact, but can't climb up. That's not necessarily a bad thing (because they are forced to stay inside)

Outside cafe

- trash cans outside disturb view/flow
- weather causes not many people to be on the street.
- construction van blocking the sidewalk

Observer 1	children	teens	adults	elderly	female	male	minority	Total
A	3	1	41	1	18	28	14	45
B					0	0	0	0
C					0	0	0	0
D					1	1	0	2
E					0	0	0	0
A	1	0	1	0	6	5	3	11
B					2	2	0	4
C					3	2	4	9
D					4	0	0	4
E					4	9	7	20
A	1	5	17	2	11	14	13	29
B					1	1	0	2
C					0	0	0	0
D					0	0	0	0
E					16	2	8	26
A	1	0	5	4	2	4	0	16
B					0	4	0	4
C					0	11	7	18
D					2	2	0	4
E					5	7	0	12
Total	37	15	66	7	74	81	67	154
%	24%	10%	62%	5%	48%	53%	44%	100%

Observer 2	children	teens	adults	elderly	female	male	minority	Total
A	15	9	3	0	0	0	0	27
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	9	1	10	0	0	0	0	20
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	10	7	0	0	0	0	0	17
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
Total	75	1	45	3	0	0	0	125
%	60%	1%	37%	2%	0%	0%	0%	100%

Observer 3	children	teens	adults	elderly	female	male	minority	Total
A	4	1	1	3	0	0	0	9
B					1	1	0	2
C					2	1	1	4
D					2	3	0	5
E					1	1	0	2
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	2	2	1	2	7	10	0	19
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	4	2	2	5	2	3	0	16
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	2	1	2	2	3	3	0	10
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
Total	25	2	16	5	30	29	0	48
%	52%	4%	33%	10%	51%	49%	0%	100%

Observer 4	children	teens	adults	elderly	female	male	minority	Total
A	1	6	3	7	2	1	0	17
B					1	3	4	8
C					2	1	1	4
D					1	5	3	9
E					0	0	0	0
A	1	2	13	8	9	13	15	49
B					8	10	12	30
C					2	2	4	8
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A	9	2	5	2	8	8	12	26
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
A					0	0	0	0
B					0	0	0	0
C					0	0	0	0
D					0	0	0	0
E					0	0	0	0
Total	20	5	54	7	38	51	64	86
%	23%	6%	63%	8%	43%	57%	74%	100%

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# 6 Comparative Spatial Experiments

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Distilling Design Approaches  
for Publicness Activation

The activation of public space remains a central challenge faced by architects and urban designers. This chapter introduces an additional experimental layer to publicness activation through a comparative reading of four situated spatial design experiments developed by the author between 2021 and 2024. Unlike the preceding chapters which examined publicness through an in-depth depiction of each experiment, the experiments assembled here enable cross-comparison to extract overlapping design approaches. Together, the experiments form a curated compilation of the author's practice during the doctoral timeframe, selected for their shared ambition to activate publicness across different typologies, institutional contexts, and degrees of designer agency.

Read together, these experiments extend earlier findings of how publicness is activated revealing recurring patterns across different contexts. First, publicness is reiterated as a threshold condition shaped through material and immaterial means that mediate the transition between private and public life. Then, collective creation shows to be able to galvanise situated communities around shared concerns, while constraints and conflict arising from institutional, social, and spatial conditions can become productive drivers for the spatial transformation. Across the designs, spatial interventions function as experimental instruments through which design and research hypotheses are tested in real situations. Rather than offering conclusive models, the chapter distils a set of design approaches that are interdisciplinary, relational, and situated, challenging conventional understandings of public space design and the role of the designer.

- # Spatial Experiments
- # Publicness Activation
- # Public Threshold
- # Crosscomparison

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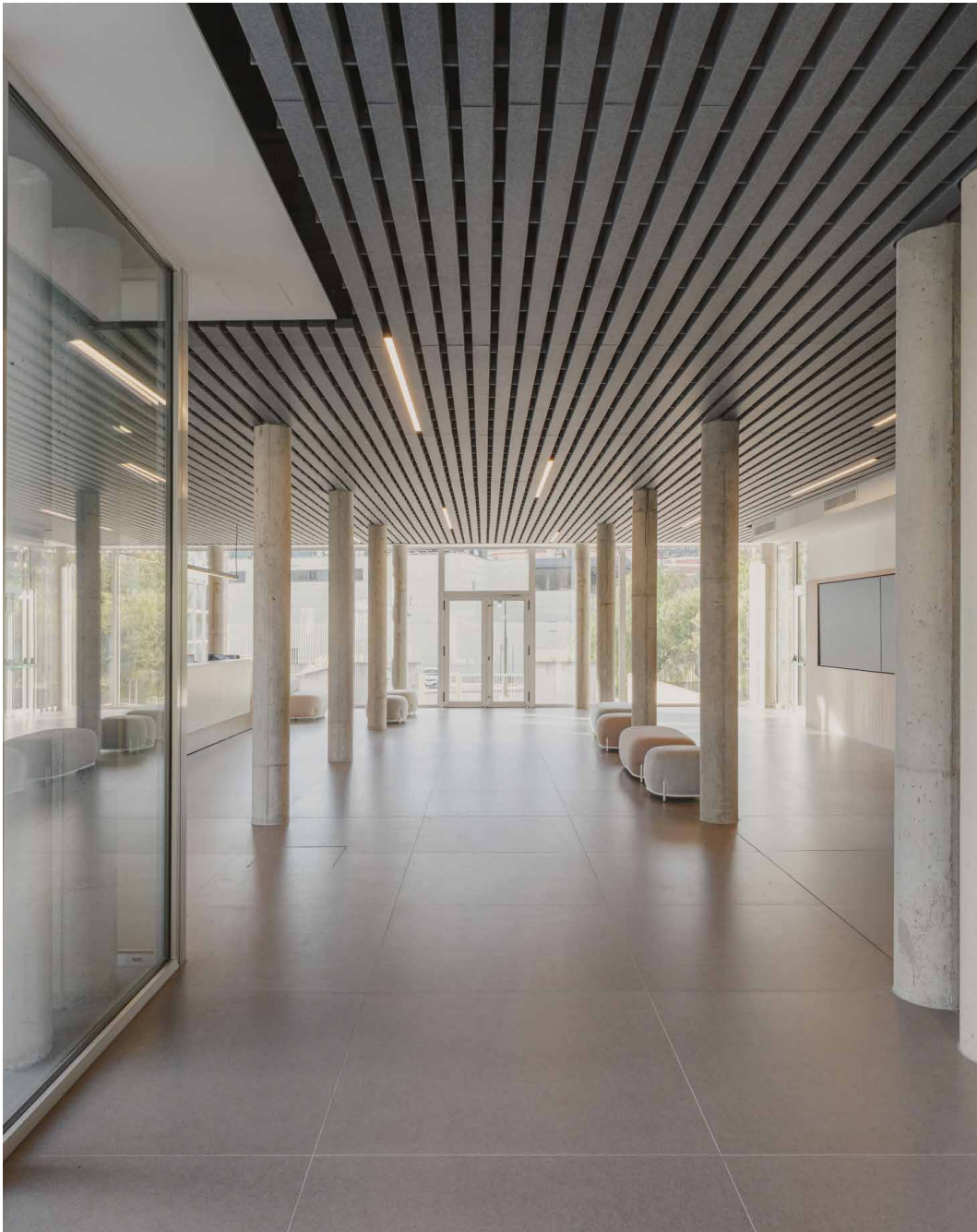
I had read in the newspaper  
about a vocational school where they helped people  
find new professional paths  
I had walked that road infinite times,  
and I never noticed that place. Just a boring brick building  
surrounded by a tall fence.

That Thursday, I decided to drop by.  
After all, I had been unemployed for 6 months and  
I was not sure how to continue, I reflected on my way there.

Once in front of the Cotes Baixes high school,  
I regretted coming here for a minute.  
What was a 50-year-old  
construction worker doing in a school full of teenagers?

From the gate, up a steep ramp  
I could see a shiny glass pavilion.  
From the ramp, I could already see  
a welcome desk and a hall with lobby-like furniture.  
I felt self-aware, but now it was too  
late to turn around: I entered the building.

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**FIG. 6.1** Entrance hall IES Cotes Baixes after the first phase of the renovation. A large open space surrounded with a glass façade frames the space as a public threshold, where circulation overlaps with moments of encounter and interaction. Source: ©Carlos Segura

## 6.1 Critical Spatial Practice Beyond Indoors and Outdoors

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Accepting public space is a continuum between indoor and outdoor, extends, blurs and merges the practice of architects and urban designers towards spatial design.<sup>273</sup> While professional divisions have typically focused on the climatic division of space, the critical practice developed in this research project centres on what brings us together: the desire to activate space for the common good.

Critical spatial practice is a mode of design that operates between art and architecture, theory and practice, and is politically and ethically engaged in the production of space. These practices do not simply produce objects or buildings, but also question the social, institutional, and spatial conditions in which they operate.<sup>274</sup> In this chapter, a collection of critical spatial practice experiments illustrates the design approaches that spatial designers can employ to support the activation of public spaces.

Cases presented here form a curated subset of the author's professional practice during the PhD period (2021–2026). Other projects from this timeframe were set aside because they did not engage public space or did revolved around publicness. As a result, this selection does not function as a complete portfolio or a representative sample of the author's work. Instead, it brings together a deliberate group of experiments aligned with the research question, enabling comparison without claiming exhaustiveness.

Experiments were developed with the research question in mind, not used as an a posteriori justification. Chosen because of their alignment with the research, the experiments consisted of spatial interventions testing the hypothesis that design can activate public space through specific design approaches. Finally, reflecting on the design processes and results allows to extract lessons for practitioners and researchers to use in their own approaches.

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<sup>273</sup> Exner and Bielefeld, *Basics Spatial Design*, 7.

<sup>274</sup> Rendell, *Art and Architecture: A Place Between*.

## 6.2 Comparing Situated Experiments: Reflexive and Critical Spatial Practice

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Unlike traditional research projects, this project was defined iteratively during its development. Instead of a linear process where the experiments and hypotheses were predefined a priori through analytical desk research, this research involved a continuous back-and-forth between theory and design, literature review and experiments, which sharpened the methods, tools, and approaches for further iteration. The common thread to all experiments was the research approach: experimental, interdisciplinary, reflexive, situated, transformative and theoretically informed.

Experiments discussed in this chapter deliberately exclude Limen and Makerlab, which are examined in depth in the preceding chapters. This exclusion is intentional and methodological. Limen and Makerlab already articulate and test core concepts such as public thresholds and collective creation forming a solid framework. Experiments brought together here form an additional experimental layer that extends the research. Some reinforce earlier findings, others refine them, and several introduce notions not previously addressed, including fully outdoor interventions and interior experiments that do not hinge on public building accessibility.

Cross-comparing experiments will also help elucidate the role of the designer-researcher as “a more complex, embodied and embedded, non-unitary, but relational and affective subject that is collaboratively linked to a material web of human and nonhuman agents”.<sup>275</sup> Additionally, the enquiry will illustrate how the designer/researcher exerts varying degrees of agency in the design processes, challenging traditional notions of designer authorship and control. The study at hand is a meta-method of four experiments. They are presented as independent yet interconnected to extract the research from design, and theory from practice.

Experiments are compared according to 3 layers of criteria: design parameters, situatedness and research & practice. These layers are broken down into the following criteria: climatic condition, scale, type of intervention, publicness, institutional setting, objective public, community role, affordances, modes of enquiry, implementation, and impact. Graphic material developed in the processes will support the comparative analyses showing the design strategies and decisions and in some cases, the results.

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<sup>275</sup> Braidotti, 'Foreword'.

## 6.3 Spatial Designs for Public Space Activation

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An experiment “is a test done in order to learn something or to discover if something works or is true”.<sup>276</sup> The designs at hand are considered experiments because they were conceived to explore how design approaches and strategies can activate publicness in public spaces. Being real-life experiments rather than laboratory tests, the setting and variables were defined by the actual context. Nevertheless, the designer/researcher steered towards programmess and processes that were productive for the research’s objectives. Besides, the ones presented here are only a relevant selection of the body of work by the author. Although situated and therefore with varying location, scale, and programme, the experiments departed from the conviction that a space’s publicness can be activated through design approaches and strategies that are collaborative, transdisciplinary and relational. Although they differ in their aims, agencies, settings, and design strategies, there are clear connections between designs. For example, De Hilleliet is a continuation of the Limen experiment, located in the same building but on a larger scale. The Valencia 360 project evolved into the Agora project, with similar topics but a different setting. The experiment’s interconnectedness and situatedness provide a solid foundation for drawing conclusions about the research objectives.

### 6.3.1 De Hilleliet (Rotterdam, 2022–2023). Collective spatial programming and urban visibility

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De Hilleliet is a continuation of the Limen project because it is housed in the same building therefore building on its situated insights, yet operating at a different scale and institutional conditions. Rather than focusing on a single programme or space, this experiment engages with the whole multi-tenant cultural building where the limen experiment happened, showcasing coexisting public and private ambitions. Examining publicness at the building scale shows how publicness can be activated when governance constraints, conflicting stakeholders, and funding interests intersect.

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<sup>276</sup> Cambridge, ‘Experiment’.

De Hilleliet building is a community and cultural hub hosting Zuid.Boijmans and other initiatives, ranging from public institutions to small entrepreneurs. It combines community functions, artist studios, office spaces, cultural institutions, a cafeteria, and event spaces. After seeing the successful activation results of the Limen experiment, the building's managers realised they could also use help in activating public spaces or "lowering the threshold" to enter the building. The challenge was identical to Zuid.Boijmans: citizens perceived the threshold to enter the space as too high. The research objective was first to understand why citizens did not enter, gather inside, or engage in activities, and to improve the situation through tactical interventions.

On its material conditions, the threshold to enter the building was recognised as very high because the façade of the building was enclosed, and citizens could not look inside; there was a lack of visibility. On the immaterial condition, there was an unconscious threshold to enter the space. It was not clear to citizens what the building was: a cultural hub? A coworking? A community space? The old high school? Am I welcome there?

Although holding the ambition to be perceived as a public space, the building was privately owned and managed. Traditionally, public space is considered to be publicly funded space. In the current context of liquid modernity, public space is also a fluid reality, a threshold between private and public that can flood or retreat through activation. Citizens do not necessarily perceive funding structures, the types of programmes and spatial ambitions indeed differ. For example, during the cold winter months, the building managers were reluctant to be perceived as a community space where citizens could just enter to warm up. De Hilleliet's challenge concerned the threshold and its indoor and outdoor conditions, but the intervention focused on the interior situation. The intervention comprised the façade, the entrance hall, and the corridors inside the building. The modes of enquiry were co-creation, prototyping, and iteration. Sometimes iteration implied trying things out with "quick wins" to observe their effect and eventually make them permanent.

Inhabiting an existing building and introducing new affordances to the neighbourhood within a consolidated urban fabric requires a particular design approach that acknowledges the building, the community, and the designer as part of an ecology of material and immaterial agents. Although the aspiration was to engage the citizens of its immediate surroundings, changing the perception of the building had a ripple effect on the area and the city at large, influencing citizens, actors, initiatives, events, and economic fluxes, among others. Embracing the complexity of the hyperdiverse setting with a critical approach to design practice and the power it has to alter the thin line between inclusion and exclusion.

Given the time and ambitions of the project, the community engagement focused on the community inside the building: organisations and renters. Furthermore, being a continuation of Limen, the context and external community were already partially known. The co-creation sessions followed the framework presented in the Makerlab chapter, which included Network Mapping, Spatial Analysis, Identity and Mission Exploration, Values and Personality, and One-Liners and Themes.<sup>277</sup>

Collective creation is primarily an act of becoming a public; thinking together creates a sense of ownership and community. First, during the co-creation sessions, the community became “a public”: they recognised each other as an ecology of agents and recognised their agency. Later, they explored what a “threshold” was and proposed references on how to “lower it”. Ultimately, all this input was taken into account when suggesting the interventions (Fig. 6.5–6.6). The co-created input, together with the researcher’s and designer’s observations and analysis, was integrated into iterative interventions to enhance the spatial qualities and ultimately better serve the community by combining various layers of the public experience, including exterior signage, wayfinding, furniture, lighting, and spatial structuring. The intention was for the interventions to be permanent and developed in conjunction with interior design strategies, including lighting, furniture, and finishes. Another vital layer in this space was wayfinding, which combined physical and digital tools to facilitate navigation among the numerous programmes available in the building (Fig. 6.8).

The design strategies of De Hillevliet can be divided into:

- Outdoor signage
- Vestibule and lobby atmosphere
- Indoor wayfinding

From the array of interventions designed, some were implemented while others stayed in the pipeline due to financial or organisational bottlenecks (Fig. 6.7). The interior design of the vestibule was a very successful quick win. Instead of entering a climatic border stripped of any function, adding some sofas, carpets, plants, and clear wayfinding hooked visitors and communicated: ‘You are welcome, sit down and participate (Fig. 6.11–6.12). Additionally, changing the lighting in the corridor tone to a warmer white completely altered the atmosphere (Fig. 6.13). Still, the multilingual verbal signage for the façade explaining the building’s affordances (eat, play, dance, paint, gather) was not realised because it stalled because of organisational and funding challenges (Fig. 6.9–6.10). In the lobby, some strategic changes were implemented.

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<sup>277</sup> For more information on the collective creation process, see Chapter 4.

Throughout the whole research project, and especially during the limen experiment, it became clear that citizens needed guidance in space to cross the threshold and especially in the last phase of liminality: reintegration. In this line, the building management agreed to the idea of having a host welcoming visitors and guiding them in a location that was not policing but inviting (Fig. 6.6-6.7). Contrary to the growing trend of abandoning entrance desks, in community interior public spaces, it is a strategy to make people feel welcome. Profiting from the hospitable meaning of coffee in Dutch culture, it was decided to combine the entrance desk with a (paid) coffee corner, making it a self-sustaining action.

The most interesting aspect of this process is that, apart from modifying the material construction of a threshold to enter, circulate and stay in the space, it prompted conversations between building managers and renters about accessibility: who the community is, who is included and excluded, and the functions of their particular interior public space within the neighbourhood.

### 6.3.2 **Valencia 360 (Valencia, 2023).** **Immersive speculative urban futures for civic engagement**

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Valencia 360 was an experimental project that aimed to explore how design could translate the municipality's 2030 sustainability missions into immersive visual experiences for public reflection and debate by creating speculative urban futures through VR. Commissioned within the framework of València World Design Capital 2022, the Las Naves Innovation Centre initiated it through its Laboratory for a Better Future, Futur-lab. As a public entity of the City Council of Valencia, Las Naves promotes urban innovation with a people-centred approach. It functions as a cultural venue for exhibitions, events, and office spaces. In this case, Las Naves acted as both commissioner and host, while the funder was the Valencia World Design Capital organisation.

To lead the process, the author/designer curated a design methodology with Non Architecture, involving five international design teams, each tasked with visualising key challenges of Valencia's climate agenda in an accessible way. Representing different locations across the city, each team developed a 360-degree image split into utopian and dystopian halves. These immersive visuals enabled viewers to explore and position themselves in relation to possible futures: which way do we want to move forward? The goal was to use fiction to create narrative tension within the images – prompting individual reflection, collective discussion, and potentially, civic action.

Valencia 360 is a particular experiment because it happened in a fully public interior, without contact with outdoor public space and does not alter the building's accessibility. Instead, it explores how publicness is activated as an emerging condition, emerging as an isolated bubble within a public interior that is already accessible. The experiment builds a case for publicness activation *inside* the threshold, speculating about the power of publicness to emerge through the design of protected spaces of interiority and reflection.

While the speculative phase of the project was extensive and (digitally) unfolded across multiple sites in the city, its physical manifestation took the form of a temporary immersive exhibition hosted inside the Las Naves innovation centre. Short-lived by design, the exhibition was conceived as a spatial intervention to enable citizens to immerse themselves in the content, regardless of their digital literacy or personal devices (such as smartphones or VR headsets). Coinciding with the opening, a symposium featuring invited experts opened a public debate on the future of Valencia in the context of the 2030 missions.

The site of the intervention – an abandoned cafeteria – required a complete re-imagination because its furniture, layout, lighting, and material finishes had not been designed to support exhibition activities. As if it were scenography design, the spatial design transformed this discarded interior into a temporary public space within a public building, providing a spatial backdrop that framed and enhanced digital visuals (Fig. 6.14, 6.17). This transformation went beyond the programmatic change, proposing a symbolic shift from neglect to publicness activation.

Apart from activating publicness by designing affordances for collective action, the exhibition introduced immersive bubbles for individual experiences, allowing for personal reflection and temporary detachment, in line with Peter Sloterdijk's Theory of Spheres.<sup>278</sup> These enclosed zones provided moments for reflection and contemplation—even while surrounded by the activity of public life (Fig. 6.15-6.16). The layout introduced unfolding spirals showing a part of the image and inviting users to wander between the speculative urban futures. Standing in the centre of each bubble, visitors were enveloped by 360-degree images, confronted with contrasting scenarios, and positioned –both physically and metaphorically– to consider which future to choose. They were expected to visualise, immerse, reflect, and discuss.

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<sup>278</sup> Sloterdijk and Hoban, *Bubbles: Spheres Volume I: Microspherology*; Sloterdijk and Hoban, *Globes: Spheres Volume II: Macrospherology*; Sloterdijk and Hoban, *Foams: Spheres Volume III: Plural Spherology*.

Designed to engage a broad general public, the intervention addressed themes of heritage, infrastructure, agriculture, waterfront, and mobility – issues chosen for their relevance to a sustainable shared urban life. Digital images could be accessed through a QR code linked to a mobile platform, but the physical exhibition served to lower the digital threshold. By offering an analogue, spatialised mode of interaction, the installation ensured that immersive content remained accessible even to those without technological tools or know-how.

As previously outlined, collective creation is understood as an approach to designing for the common good.<sup>279</sup> In this case, collaboration between the Valencia World Design Capital team, Las Naves, and the five international design teams was structured as a collective creation process. The designer/researcher took on the role of curator—mediating, organising, communicating, steering, and ultimately showcasing the collective outcome. The result was both a shared process and a shared product shaped by the human and nonhuman agents in the ecology.

Valencia 360, including the curation of the design process, development of digital visualisations, immersive exhibition, and public dissemination event, constituted an experiment in collective problematisation.<sup>280</sup> It tested how speculative design and spatial experience could render abstract municipal goals tangible and relatable to citizens. While its impact may be difficult to measure due to the intangibility of reflection and debate, the project's visibility, press coverage, and public attendance indicate that it successfully “created a public” around shared matters of concern.<sup>281</sup>

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<sup>279</sup> See Chapter 3 for a fuller discussion on Collective Creation.

<sup>280</sup> Hartevelde and Muñoz Aparici, 'Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design'.

<sup>281</sup> Latour, 'Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern'.

### 6.3.3 **Agora (Valencia, 2024, unrealised).** **Creating a public around the 2030 missions**

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Agora was conceived as a continuation of the Valencia 360 project, aiming to bring the municipality's 2030 Missions even closer to citizens. The proposal involved creating pavilions across decentralised urban locations, using repurposed cargo containers to host exhibitions and activities. Five design teams, alongside the author as designer/researcher, were invited to explore different topics, to make the climate missions more tangible and engaging. Due to a change in political context, Agora was not realised. Particularly its unrealised status reveals the vulnerability of publicness activation to shifts in governance, adding a critical dimension to the comparative reading of the work.

In this case, the concept focused on the theme of “knowledge transfer”, developed in collaboration with the University of Valencia. Institutionally, the project built on the model developed for Valencia 360 but added a new layer: the University of Valencia acted as both client and content provider, owning the site and curating the exhibition content. This collaboration exemplified a university–municipality partnership aimed at promoting public access to academic knowledge, particularly in relation to the Sustainable Development Goals.

Rather than constructing a new public space, the intervention sought to activate an existing one. The pavilion was to be located on university grounds: a space that is publicly funded yet only partially accessible, as it is surrounded by fencing and primarily used by students and staff (Fig. 6.19). Despite this, the selected site was immediately apparent from the public street, allowing for a seamless interface between institutional and public spaces. The intervention was to take the form of a temporary pavilion designed as an ephemeral spatial installation, offering affordances for civic engagement and public activities (Fig. 6.18). A small indoor exhibition would be housed inside a container. At the same time, a gathering space was defined around it through simple means: seating, a delineated floor surface, and an urban-scale, powerful image that served as a visual and symbolic backdrop (Fig. 6.20-6.21). The design centred on visual communication as a public awareness activation strategy. Aiming to catch the attention of passers-by, the large-scale visual wrapping the pavilion sought to express the idea that knowledge is created through interaction—that we are all particles in an infinite universe, and that connection is the medium through which knowledge is produced. Material and colour choices were selected to evoke this sense of immensity and interconnectedness.

Around the container, the gathering area was designed to accommodate a range of activities, allowing students and citizens to gather, present, discuss, relax, participate, or visit the exhibition. The spatial setup and graphic identity together aimed to communicate the shared commitment between the municipality and the university to knowledge transfer in support of the 2030 Missions.

Regrettably, a change in local government led to the project's stall, as its sustainability-focused message no longer aligned with the new administration's priorities. Consequently, the potential publicness activation of this intervention remains theoretical. Nonetheless, Agora exemplifies political fragility in the co-production of public space, highlighting how design-led civic engagement can be vulnerable to shifting political circumstances.

#### 6.3.4 **Cotes Baixes (Alcoi, 2023–2024). Everyday publicness in educational space**

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Cotes Baixes is a major renovation of an existing public vocational high school in Alcoi, Alicante, Spain. This design experiment extends the research into an educational context where publicness unfolds through everyday use rather than temporary interventions, adding a layer of permanence to the experimental research. Activation here emerges through long-term spatial reconfiguration allowing to depict how publicness operates when activation becomes embedded within daily public life.

The Cotes Baixes school is an internationally renowned Centre of Excellence, offering basic high school education (12–16 years) and vocational training, such as mechanics, carpentry, or robotics. Their employment rates and business collaborations are excellent, and they aspire for their space to better represent their ambitions and achievements. The school board had two main objectives: to make their study programmes and student project results more accessible to the public, and to strengthen the community feeling by addressing the challenges posed by the temporary nature of teaching appointments. In other words, they aimed to increase the accessibility of the space to visitors and citizens while improving the common areas. In a way, this pilot project intended to demonstrate how vocational training high schools can emulate the “cool” atmosphere of a university campus: public, open, modern, etc. The spatial intervention in Cotes Baixes encompassed both interior and exterior public spaces, including the entrance, playgrounds, meeting spaces, offices, student canteen, and cafeteria.

Coordinating all actions as a general contractor, the school board directly commissioned the design and construction. Funding primarily came from European sources to support innovation and digitalisation in professional education across Europe. By placing experiential design at the centre and assembling a technical and industrial team to bring this experience to life, the approach was pioneering. Instead of beginning with: “What do we need to renovate?”, they asked “What do we want people to feel?” and “How do we want people to connect?”—a significant shift in perspective in traditional public space design. After developing a comprehensive “experiential design” phase (Fig. 6.21–6.22), a large consortium of technicians and companies was formed, with the focus on realising the spatial public experience, covering finishes, wayfinding through technology, furniture, lighting, and acoustics. The industrial consortium collaborated to create an innovative pilot project that showcases the best products and practices for high school design, aiming for replication and dissemination. The designer/researcher played a role in design coordination and “quality assurance” concerning the initial experiential design, working alongside the technical architect, BIM expert, and smaller contractors, as well as liaising with suppliers to select materials. Furthermore, this approach kept a focus on the spatial public experience, with the details and technical specifications tailored accordingly.

Given the timeline and urgency to start construction, and at the client’s discretion, the collective creation was developed in parallel with the construction: all interior choices were made collectively with suppliers, contractors, the technical team, and the school board through a networked approach. Understanding a design process as an ecology where actors, objects and immaterial agents negotiate, the design authorship is then diluted into a collective effort around a situated reality. The final aesthetic appearance embodies the compromises, agonism, pressure, limited resources, and complexity. Contrary to a heroic designer-centric perspective, Cotes Baixes demonstrates how shared responsibility, where each actor does their best, can yield interesting results beyond simplistic and totalitarian design approaches.

Phase 1 of the project included the hall, management offices, cafeteria, and student aula, and was carried out from summer 2024 to summer 2025 (Fig. 6.24–6.27). Afterwards, co-teaching and outdoor spaces will be addressed. It is worth noting that the successful implementation of this project depended on the proactivity and cooperation of the school’s board and technical team. This ensures that future phases will be managed and led by the board itself, which has adopted the design decisions as its own and feels empowered to take command of completing the experiential design.

Criteria	De Hillevliet	Valencia 360	Agora	Cotes Baixes
<b>Design Parameters</b>				
<b>Climatic Condition</b>	Indoor	Indoor	Outdoor	Indoor + Outdoor
<b>Scale</b>	L	S	S	XL
<b>Type Of Spatial Intervention</b>	Permanent. Interior Design	Ephemereal. Exhibition Design	Ephemereal. Pavilion Design	Permanent. Architectural Design
<b>Publicness &amp; Threshold</b>	High-Threshold	Inexistent	Inexistent	High-Threshold
<b>Situatedness</b>				
<b>Institutional Setting</b>	Cultural Hub (Private Funding Public Interest)	Municipality (Innovation Department)	Municipality (Innovation Department)	High School (European Funds)
<b>Objective Public</b>	Renters (Institutions, Creatives, Entrepreneurs)	Visitors, Citizens	Students, Citizens	Students, Teacher, Citizens
<b>Community Role</b>	Co-Creation	Visitors	Visitors	Users
<b>Affordances</b>	Accessing, Gathering, Understanding, Wayfinding, Orientation	Imagining, Visualizing, Immersing, Reflecting	Learning, Understanding, Communicating, Gathering	Experiencing, Visiting, Gathering, Interacting, Working,
<b>Research &amp; Practice</b>				
<b>Mode of Enquiry</b>	Co-Creation + Observation	Speculating + Reflecting	Speculating + Observing (Intended)	Experimenting + Observing (Expected)
<b>Implementation &amp; Impact</b>	Partially Implemented (Organizational Reasons)	Realised	Unrealised (Political Reasons)	Under Construction

FIG. 6.2 Comparative overview of the four spatial experiments around their design parameters, situatedness, and relation to research and practice.

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Not knowing where to go or what to do,  
I stared at the large screens showing data  
about students and studies  
that looked like an airplane dashboard!

Seeing my apparent confusion, the concierge  
invited me to discover the public spaces of the high school  
where there was an exhibition on the different study tracks.  
Walking through the student space, cafeteria, courtyard and hall  
I was impressed by the results of student challenges and projects.  
The space was comfortable, flexible and open  
with some touches of technology.

On my way back home, I thought to myself:  
Yes, I was older than most.  
Yes, it would be hard.  
Yet, this seemed like a space where I could learn  
and a community where I could belong.

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FIG. 6.3 Valencia 360 exhibition, immersive installation within Las Naves public innovation centre. Source: ©Lucas Momparler

## 6.4 Design Approaches to Activate Publicness

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Cross-comparing the experiments across different criteria related to design parameters, situatedness, and research and practice highlighted important findings on how design approaches in spatial interventions can activate publicness. Contrasting their overlaps and differences in criteria displayed cross-cutting themes, resulting in significant insights for the research. These themes have been categorised under spatial design, co-creation processes, institutional conditions, and situatedness and context.

### 6.4.1 Spatial Design

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#### **Publicness is shaped by both material and immaterial thresholds**

In cases where the intervention occurred in existing interior public spaces (De Hillevliet, Valencia 360, Cotes Baixes), the challenge to activate publicness was to lower the threshold for accessing and participating in public life. In the Agora project, publicness was activated by constructing a new threshold from scratch that was both attractive and approachable. In all cases, the challenge to design the threshold was material and immaterial.

In *De Hillevliet*, small-scale, targeted interventions emanated from co-creation — such as lighting, furnishing, and wayfinding — altered perceptions of accessibility and invited people to stay and interact in spaces previously used only for circulation. In *Valencia 360*, small scenography gestures — theatre curtain, lighting and transformed an abandoned cafeteria into a temporary exhibition space. Furthermore, the immaterial threshold to enter the digital visualisations was lowered through the physical intervention being as accessible as possible. In *Cotes Baixes*, the experiential design approach to transform a vocational school into an open civic environment encompassed material interventions with the immaterial act of forming a design team around “the public experience”.

Publicness activation occurs on the immaterial level through perceptual, social, and symbolic means; from perceptual shifts in how a building is “imagined” or “understood” through the internal and external pedagogy of defining spatial uses (*De Hillevliet*), to the collective reflection around speculative futures (*Valencia 360*), to the representative power of knowledge transfer (*Agora*) or the intention to honour the name of public high school by offering a transparent vision of the institution to the general public (*Cotes Baixes*).

### **Spatial affordances influence modes of engagement**

Physical configurations prompted different types of public life engagement. Designing a hall with clarity and fixedness for flexibility, in *De Hillevliet* paradoxically encouraged interaction and community. On the other hand, the immersive “bubbles” in *Valencia 360* facilitated private reflection within a public setting by affording a private moment in the public sphere. *Cotes Baixes*’ spatial route aimed to guide visitors through programmes and narratives, shaping their perception: what they observed, felt, or where they sat. Located next to the main access on the University of Valencia Campus, *Agora* aimed to encourage passers-by to observe, intervene, gather, and interact from both close and distant perspectives, thereby expanding the sphere of influence of the intervention.

## 6.4.2 Co-creation Processes

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### **Co-creation functions as a catalyst for ownership and identity**

When collective creation processes were embedded in the design process (*De Hillevliet*, *Valencia 360*, *Cotes Baixes*), they fostered a sense of “becoming a public” among participants, enabling them to define shared values and influence spatial outcomes by taking ownership over the intervention implementation. In *Agora*, though unrealised, collaboration between the municipality and university demonstrated potential for public space activation strategies to communicate and foster public values to the general public.

### **Negotiation and constraints as an asset to design processes**

All implemented designs involved adaptations due to budget constraints, timelines, governance, material availability, or stakeholder interests, resulting in compromises that often sharpened rather than diluted the design intent. For example, the parallel development of construction and design shaped the spatial, programmatic, and material outcomes in *Cotes Baixes*, exemplifying how the iterative negotiation of all small design decisions can still produce coherent public experiences.

### 6.4.3 Institutional Conditions

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#### **Political and institutional frameworks define publicness**

While *De Hillevliet*, *Valencia 360*, and *Cotes Baixes* advanced to some degree of implementation — albeit with compromises — *Agora*'s cancellation exposed the fragility of activating public spaces under shifting political agendas. Publicness depends on governance and institutional changes, which determine the thresholds of access and inclusivity. For instance, *De Hillevliet*'s private management restricted its use as a fully public community space, wanting to maintain a certain degree of public threshold.

### 6.4.4 Situatedness & Context

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#### **Situatedness and context specificity limit direct transferability but offer adaptable strategies**

Each intervention was deeply situated and embedded in its local ecology of human and nonhuman agents, woven by people, stories, objects and spatial conditions. The findings underscore that while design strategies—such as lowering thresholds, integrating wayfinding, or flexible furniture—can be abstracted, their effectiveness depends on the specific situation.

#### **Situatedness as a productive constraint**

Embracing situatedness and its consequent constraints on budget, timelines, governance, and aesthetics can be turned around into a design super-power. Taking the available materials, information, actors, or preliminary work as a given in *Limen* and *Cotes Baixes*, made room for a deeper reflection on the design intentions in that specific context. Situatedness is not limiting the design scope but powering design decisions and outcomes. In *De Hillevliet*, organisational stalling to add exterior multilingual signage due to lack of funding showed a clear pitfall in private-public spatial ownership; in *Valencia 360*, the temporary nature of the exhibition forced lightweight, easily reversible scenography in the form of 360 bubbles that ended up producing a positively perceived spatial experience; in *Cotes Baixes*, developing a parallel design-and-build with iterative supplier negotiation resulted in a hybrid authorship which allowed for quicker implementation and higher quality standards because of collective ownership. In this way, situatedness functioned as both a limit and a driver in the design process, supporting better design outcomes.

## 6.5 Design as Relational Practice for Public Life

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*It is not in our power to eliminate conflicts and escape our human condition, but it is in our power to create the practices, discourses and institutions that would allow those conflicts to take an agonistic form.<sup>282</sup>*

Cross-comparing the experiments aimed to demonstrate that multi-scalar spatial design can activate public space through design processes based on collective creation, situatedness, and interdisciplinary approaches. By comparing four design experiments developed by the author, which vary in scale, location, and objectives, the aim was to distil the common design approaches and strategies for activating public space. The comparison of the design experiments yielded relevant results in the areas of spatial design, situatedness and context, co-creation processes, and institutional conditions.

The spatial design of public spaces to activate their publicness starts by recognising the public threshold—the gap between the private individual and engaging in public life. The experiments confirmed that the public threshold has both material and immaterial dimensions and can therefore be intentionally shaped by design when the experience of the private individual is taken into account. Material parameters are tangible, physical features that define, extend, or obstruct the threshold. Immaterial parameters are social, cultural, and affective dimensions that shape the perception and use of the threshold. Transitioning from private individual to engaging in the public experience is defined by the public threshold and, as the *limen* experiment proves, can be conceptualised as a liminal experience. Yet, the public threshold does not always coincide with the transition from outdoor to indoor public space—or public building accessibility—as the Valencia 360 or Agora experiments show. These experiments confirm that publicness extends beyond the physical to include community, atmosphere, orientation, clarity, ownership and flexibility. The experiments confirm that activation is as much about meaning-making as about physical change.

Findings reinforce the need to address both the perceptual and symbolic aspects of publicness, not just physical access.

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<sup>282</sup> Mouffe, *On the Political*, 135.

Combining affective and non-affective qualities into spatial affordances is how design can influence public life and liminality. The physical construct of the spatial interventions alters how citizens use the space because of the affective capacity of design artefacts. For example, in the de Hilleviet experiment, the new spatial affordance of the seating area and coffee corner at the lobby afforded new ways of engaging. The spatial affordances enabled by these new artefacts (furniture) allow for intentional and unintentional actions that extend beyond design intentions.<sup>283</sup> Both intentional and unintentional actions contribute to the activation of public space. Experiments showed that affordances should support multiple modes of engagement and action, from individual reflection to collective participation.

De Hilleviet confirmed that public space activation is most effective when preceded by collective creation, as it catalyses ownership and identity. Nevertheless, Valencia 360, Agora, and Cotes Baixes achieved positive results in public space activation through restricted collective creation with a few relevant stakeholders and accessible tools, rather than workshop-like activities. This suggests that, more important than the tools used for collective creation, designing for public space activation hinges on a design approach that is “embodied and embedded, relational and affective, [...] in connection to human and nonhuman agents and forces”.<sup>284</sup> Collective creation becomes then a tool for incorporating subjectivity in design as a complex and heterogeneous assemblage.<sup>285</sup>

Embracing the complexity and heterogeneous nature of public space in design approaches entails incorporating negotiation, conflict, and constraints as positive design factors. Design as “conflictual consensus”.<sup>286</sup> Designing for the collective and the complex relationships between different agents is a productive and generative act of becoming, for the product, the process, and the designer.<sup>287</sup> That means that designers “stay in the trouble” by remaining with the difficulties, contradictions and entanglements in the context by cultivating response-ability, “that is also collective knowing and doing, an ecology of practices.”<sup>288</sup> Developing a design during its construction where the decisions are negotiated live between providers, clients and technicians, like in Cotes Baixes, is a design trouble. Challenges deriving from the

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<sup>283</sup> Widmer and Rérat, 'Operationalizing Affordances for Public Space'.

<sup>284</sup> Braidotti, 'Foreword', xiv.

<sup>285</sup> Deleuze and Guattari, *A Thousand Plateaus*.

<sup>286</sup>

<sup>287</sup> Deleuze, *Difference and Repetition*.

<sup>288</sup> Haraway, *Staying with the Trouble*, 34.

situatedness and entanglements in a design process can become productive with the right design response-ability. However, such a designerly approach redefines traditional authorship definitions towards authorship as adaptive, situated, and critically engaged.

Situatedness and its consequential constraints and limitations were therefore an asset to the experiment's research and design. The specificity of the contexts makes their direct research transferability to other contexts difficult; yet, it offers precise results on what design strategies can do to activate publicness in public spaces on different scales. While the aesthetic results of the designs may change with other contexts, agents, or affordances, it is the design approach that is foregrounded. The successful application of design approaches and strategies depends on embeddedness them in local contexts. What worked in *Cotes Baixes* will not necessarily work in every high school, only the design approaches around co-creation, situatedness and publicness will. First, by using design as a way to explore theoretical questions such as liminality, public awareness or public debate. Then, by designing from a relational perspective, focusing on the collective as an ecology.

Ultimately, the experiments demonstrate that publicness remains contingent upon governance and institutional will. Good governance can enhance a process, such as *Cotes Baixes*, by positively contributing to the design process. In contrast, poor governance can undermine it or even stop it, as seen in *Agora*. *Agora* exemplifies how political change can dismantle co-produced projects, raising questions about resilience strategies for civic design transformations. Design approaches can mediate and channel these difficulties by acknowledging design as a form of politics.<sup>289</sup>

The comparative experiments confirm that activating public space depends on the design approaches and strategies employed. At the core of publicness activation through design is understanding the public threshold as a liminal space where individuals transition from private to public life. This threshold is both material and immaterial, shaped equally by symbolic and affective dimensions as by physical accessibility, and thus influenced by design. The interventions showed how the artefacts enable both intentional and unintentional affordances that go beyond the designer's intent and help promote publicness. To foster publicness, collective creation emerged as a key driver for ownership and identity. However, its success was not linked to specific tools or workshop formats, but rather to the embodied, embedded, and relational qualities of the design approach. Situatedness, with its conflicts, negotiations, and limitations, was embraced not as a constraint but as

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<sup>289</sup> Mouffe, *On the Political*, 125.

a productive condition, requiring a form of design response-ability that remains engaged with complexities and contradictions. Ultimately, the experiments reveal that publicness depends on governance and institutional willingness, which can either support or hinder design processes. Therefore, design must be recognised as a political act mediating between institutions, publics, and the delicate ecologies where civic life unfolds. Although the specific outcomes of the experiments cannot be directly applied elsewhere, the approaches and strategies can be adapted, demonstrating how design-led research can translate theoretical concepts, such as liminality, thresholds, and collective creation, into context-specific practices.

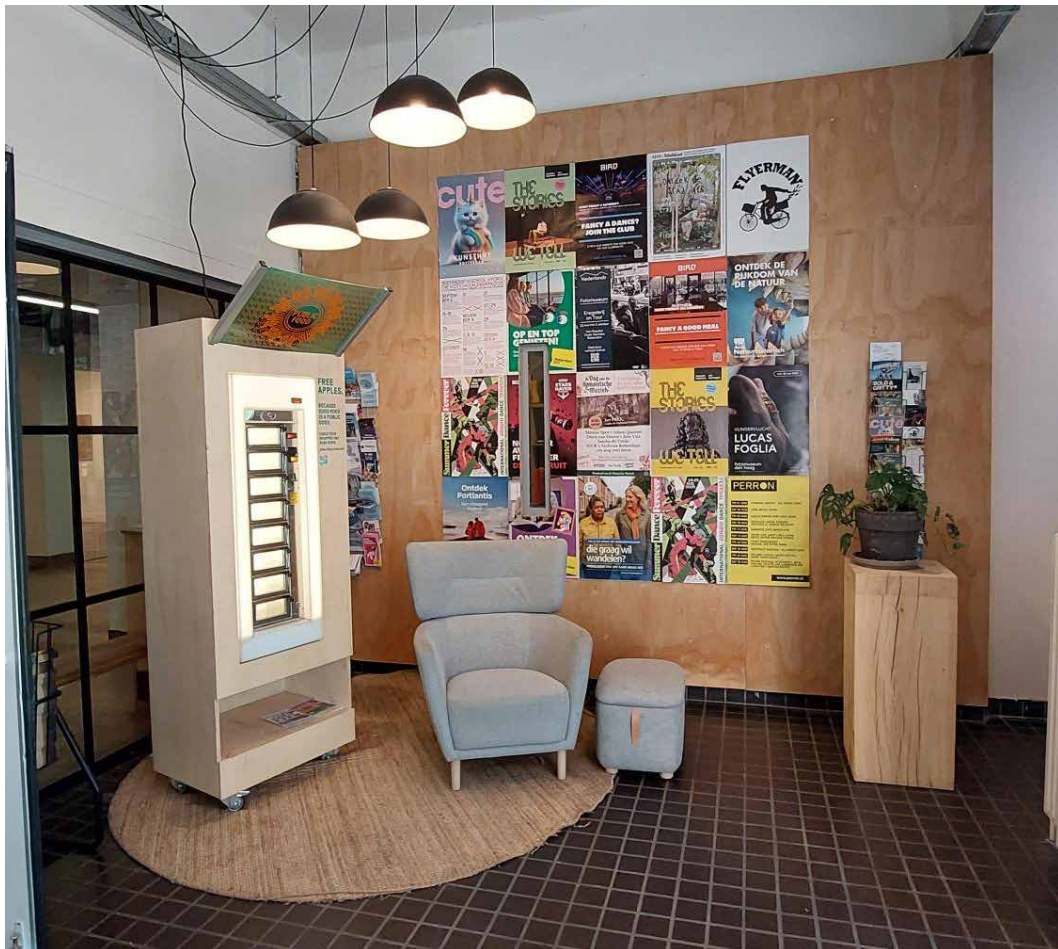


FIG. 6.4 Vestibule of De Hillevliet in 2025, after the project finalisation. Even years after, the strategy to be welcoming in the threshold proves valid.

## 6.6 From Strategies to Principles: Activating Publicness through Spatial Design

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The activation of public space to engage citizens in public life challenges common design approaches. The current research has examined how design approaches in spatial interventions can activate publicness in diverse institutional and urban contexts. Through four situated experiments— *De Hillevliet*, *Valencia 360*, *Agora*, and *Cotes Baixes* – it has been demonstrated that publicness can be activated through collective creation, situatedness, and interdisciplinary approaches. It has also been proven that the activation of a space's publicness hinges on recognising the public threshold as the liminal space where individuals transition from private to public life, consisting of both material and immaterial qualities.

The contribution of this research lies in articulating a set of adaptable design principles for activating publicness: it emerges at the public thresholds or liminal estates shaping the transition from private to public life; embed co-creation as a continuous process of collective problematisation; use spatial intervention as a tool to test hypotheses through affordances, accept constraints as productive sharpening of design; use speculation and imagination to translate abstract concepts into spatial experiences; and embrace design as politics mediating between publics. These approaches offer a range of tactics that can be tailored to diverse contexts and positionalities. Future work could explore how these principles can be operationalised on other scales, tested across broader geographic and cultural contexts or by different disciplines such as the art of interior design. In doing so, designers and researchers may further advance the role of spatial design as a catalyst for inclusive public life.

With the growth of cities and, consequently, urban challenges in late modernity, designing public spaces with the intention of better contributing to public life will remain the cornerstone of urban and architectural work. Expanding the toolkit and approaches available to spatial designers in doing so presents an opportunity to actualise both the theoretical understanding and practical design of public life in public spaces.

# De Hillevliet

## Plan Van Eisen – Beleving Hillevliet

Prioriteit lange termijn

### Uitstraling gebouw (buitenkant)

#### **Wat is het resultaat?**

Aantrekkelijke uitstraling (simpel, wat kun je hier binnen doen?) van het gebouw, geen logo's. Eventueel wel kleine logo's naast de deur, namen en logo's bij binnenkomst in tochtportaal.

#### **Wat moet het kunnen of doen?**

Nieuwe, frisse uitstraling van het gebouw naar de wijk toe 'hier gebeurt iets'

- Laagdrempeligheid naar de wijk en op
- de tweede plaats een creatieve uitstraling.

#### **Wat moet het resultaat juist niet kunnen/doen?**

Bewoners afschrikken  
Bewoners verwarren  
Logo-parade

#### **Wat is het budget?**

Signing outdoor €5000 (uitgangspunt)

### Saamhorigheid in de entree

#### **Wat is het resultaat?**

- Bij binnenkomst wordt het duidelijk dat je in de Hillevliet bent
- De grootsheid van de entree ruimte is minder overweldigend.
- Je wordt ontvangen met koffie en een glimlach (persoonlijk)
- Je kunt je vraag stellen en word geholpen.
- Duidelijke signing en bewegwijzering

#### **Wat moet het kunnen of doen?**

- Ruimte voor kunst (Intro expositieruimte)
- Ruimte om te wachten en te verblijven (koffiebar, zitruimte, gezelligheid, warmte)
- Buurtbibliotheek in gebruik
- Bezoekers voelen zich welkom
- Bezoekers worden geïnformeerd
- Bezoekers kunnen zelfstandig de weg vinden

#### **Wat moet het resultaat juist niet kunnen/doen?**

- Onpersoonlijk voelen 'ik hoor hier niet'
- Onduidelijk: 'waar ben ik?'
- Iedereen is welkom maar we zijn geen hangplek. (duidelijke regels)

#### **Wat is het budget?**

Entree €5000  
Signing indoor €2500

Prioriteit korte termijn

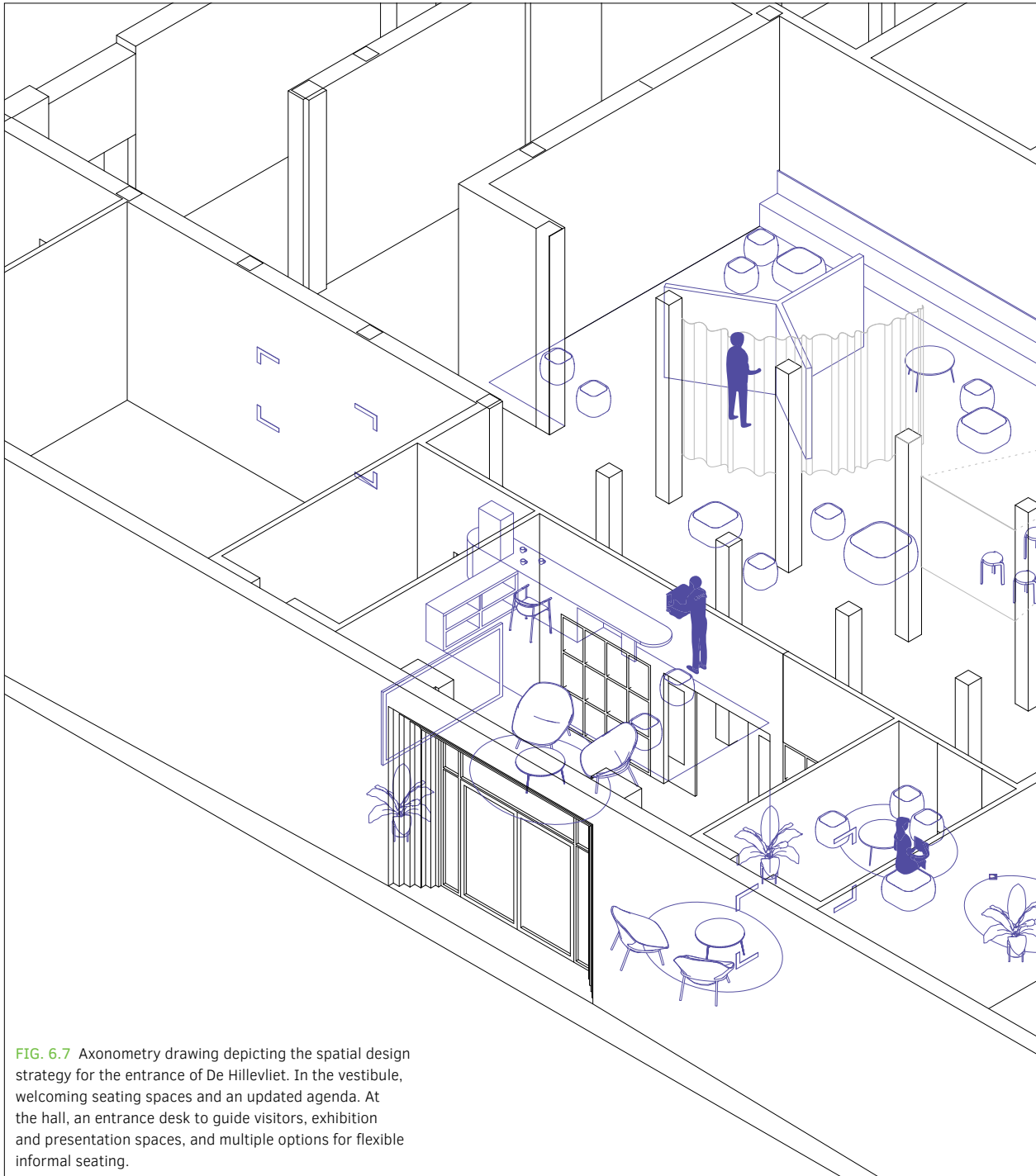
**We staan open voor alle quick fixes die er na de bijeenkomst uit zijn gekomen. We gaan er graag mee aan de slag.**

- We zijn in gesprek met Sococo koffie over een koffiebar met bemanning in de entree.
- ander licht op sommige plekken.
- De posterwand in het tochtportaal is veranderd.
- Begane grond gang deuren gaan we aanpassen zodat ze toegankelijker/uitnodiger zijn voor bezoekers.
- Solange verwerkt straks 'Intro' nog verder in het geheel wanneer jouw voorstel er ligt. (zij kan dit eventueel op de website al een plek geven)

FIG. 6.5 Design programme of requirements for the public space activation strategy resultant from the collective creation process in De Hillevliet.

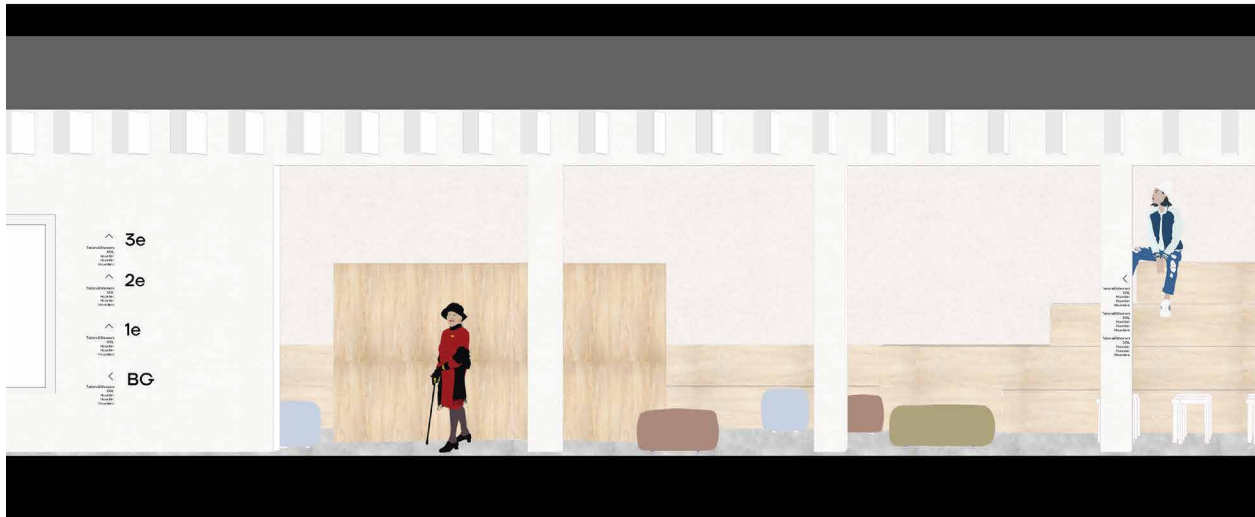


FIG. 6.6 A collection of spatial references resulting from the collective creation workshop on “the entrance threshold” at De Hillevliet.



**FIG. 6.7** Axonometry drawing depicting the spatial design strategy for the entrance of De Hillevliet. In the vestibule, welcoming seating spaces and an updated agenda. At the hall, an entrance desk to guide visitors, exhibition and presentation spaces, and multiple options for flexible informal seating.





**FIG. 6.8** Section drawing across the entrance hall in De Hillevliet illustrating the proposed wayfinding and custom-made seating crossing the exhibition, presentation and living spaces.

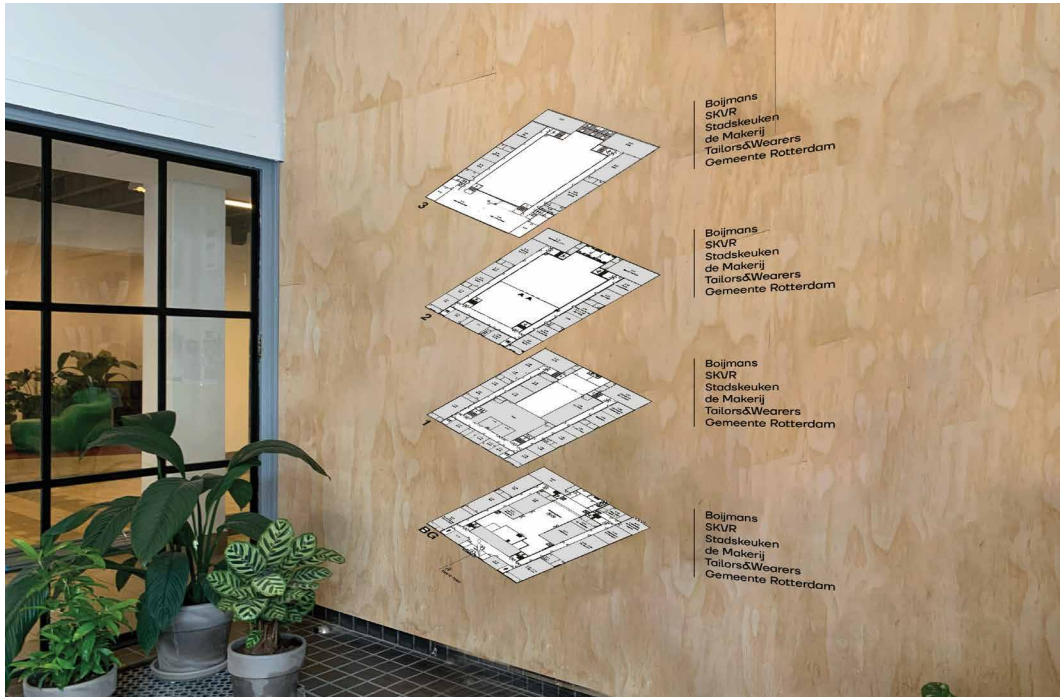




FIG. 6.9 Proposed interventions in the façade of De Hillevliet, main entrance (before and after). A large scale digital board shows the names of the institutions present in the building.



FIG. 6.10 Proposed interventions in the façade of De Hillevliet, side view (before and after). A large scale artistic poster board shows the logos of the institutions present in the building.



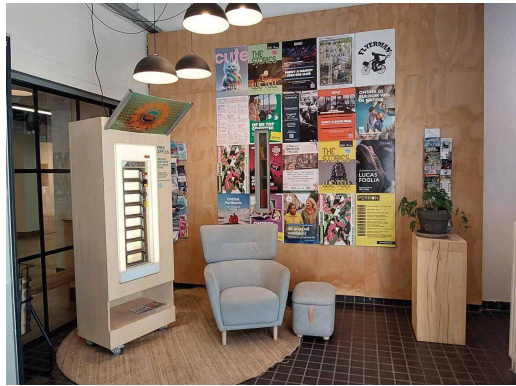
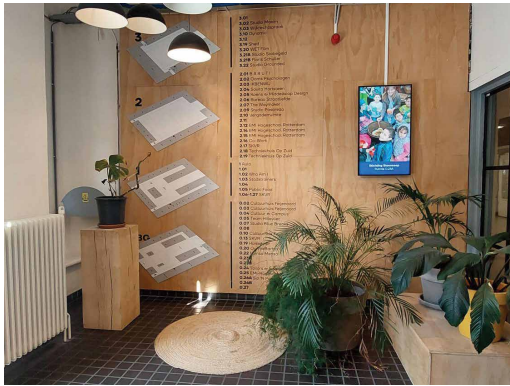
**FIG. 6.11** Proposed interventions in the vestibule of De Hillevliet, right side (before and after). Building floor plans with corresponding institutional names act as wayfinding.



**FIG. 6.12** Proposed interventions in the vestibule of De Hillevliet, left side (before and after). A weekly activity agenda shows visitors where they can participate while the lounge corner welcomes them.



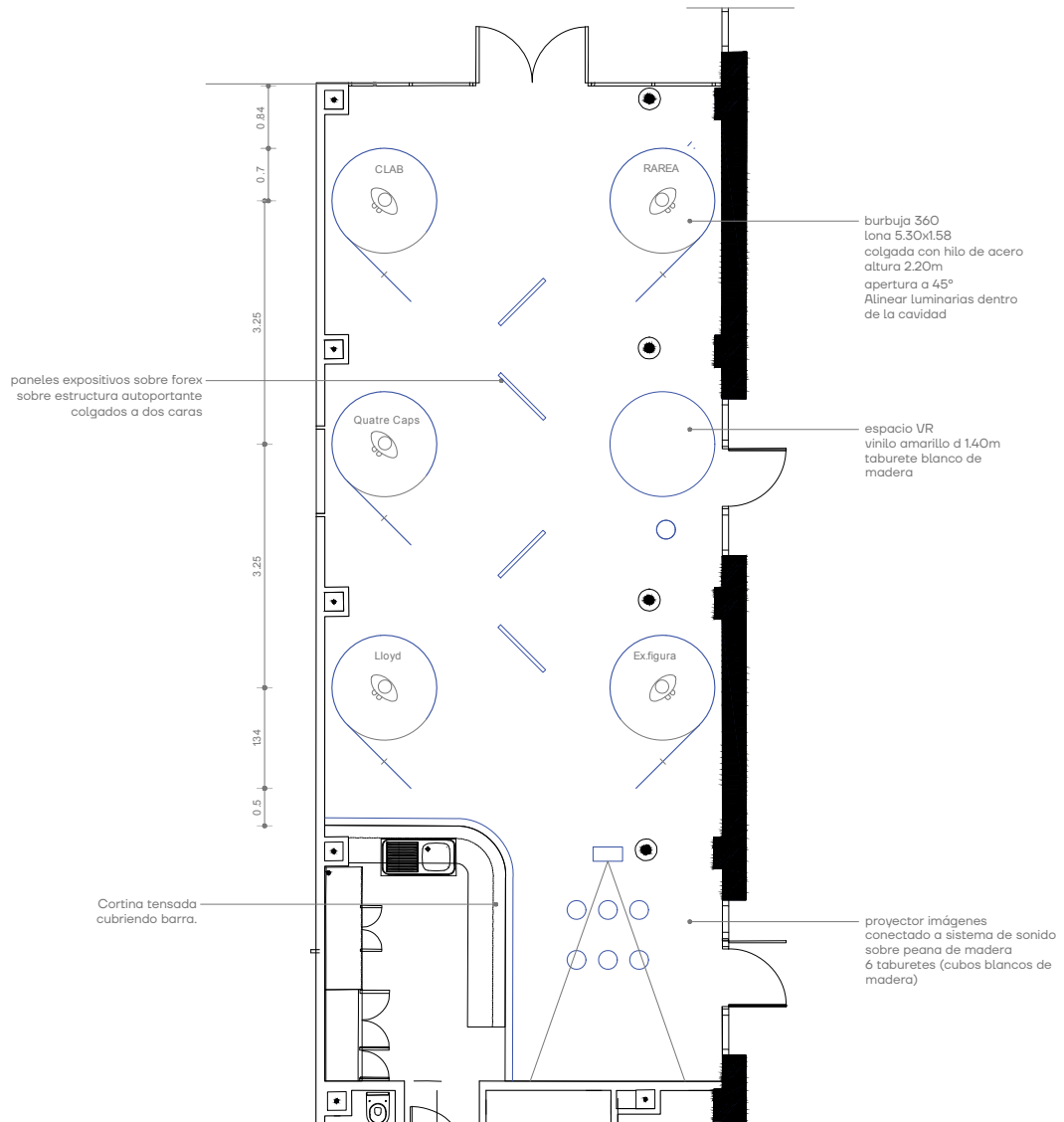
**FIG. 6.13** Estate of De Hillevliet's interior and exterior in 2025, after the project finalisation. Clearly, some aspects of the spatial strategy were implemented and maintained (vestibule, flexible seating options, lighting, living room feeling, welcoming desk).

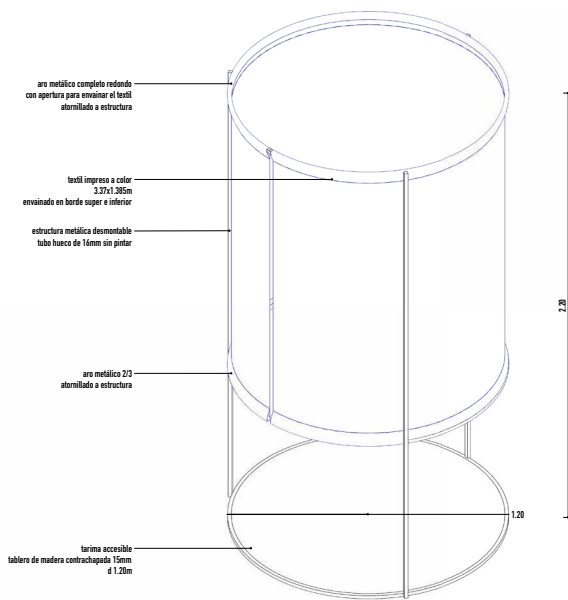


# Valencia 360

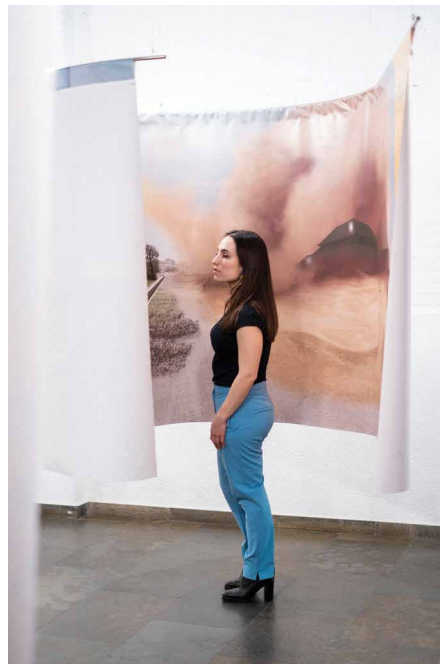


**FIG. 6.14** Drawings of the Valencia 360 exhibition design (axonometry and floor plan). Each 360 image was printed on a hanging fabric wrapped around visitors creating a bubble of immersion into utopic/dystopic futures. Virtual reality glasses, making of videos and posters completed the exhibition.





**FIG. 6.15** Technical drawing for a 360 exhibition bubble, early dismissed proposal.



**FIG. 6.16** Person standing in the middle of the immersive bubble presenting the dystopic and utopic urban futures.

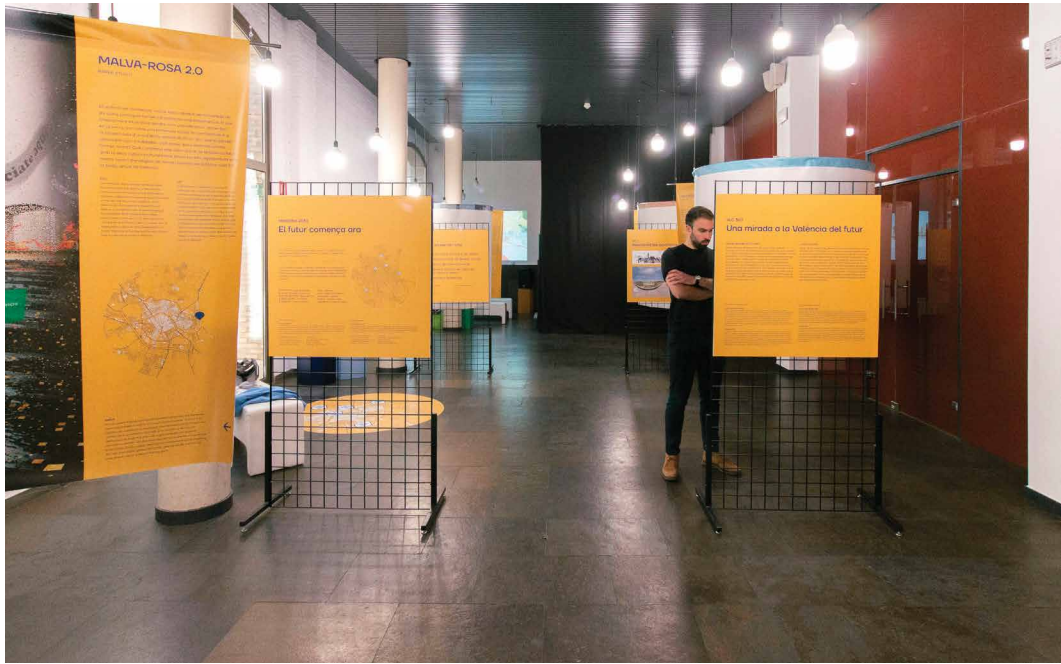
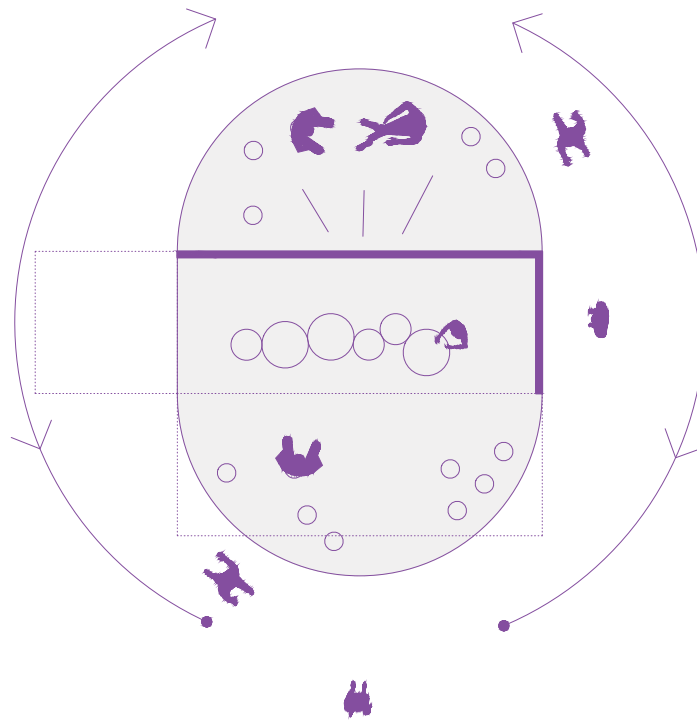


FIG. 6.17 General view of the Valencia 360 exhibition presenting the exhibition panels, immersive bubbles and VR corner. Source: ©Lucas Momparler

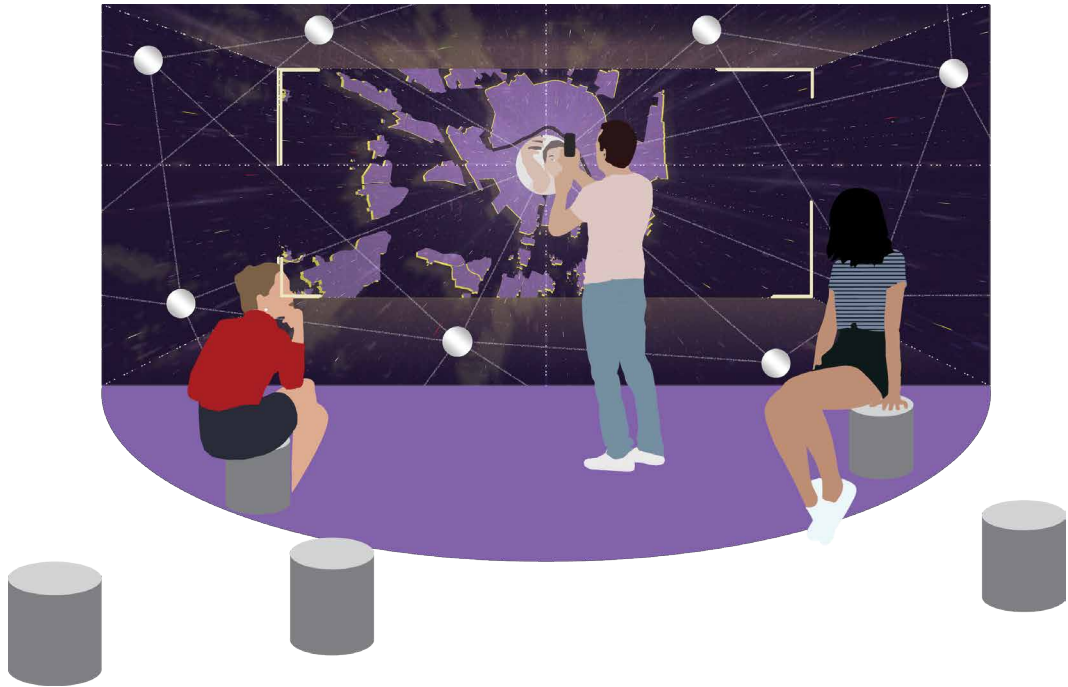
# Agora



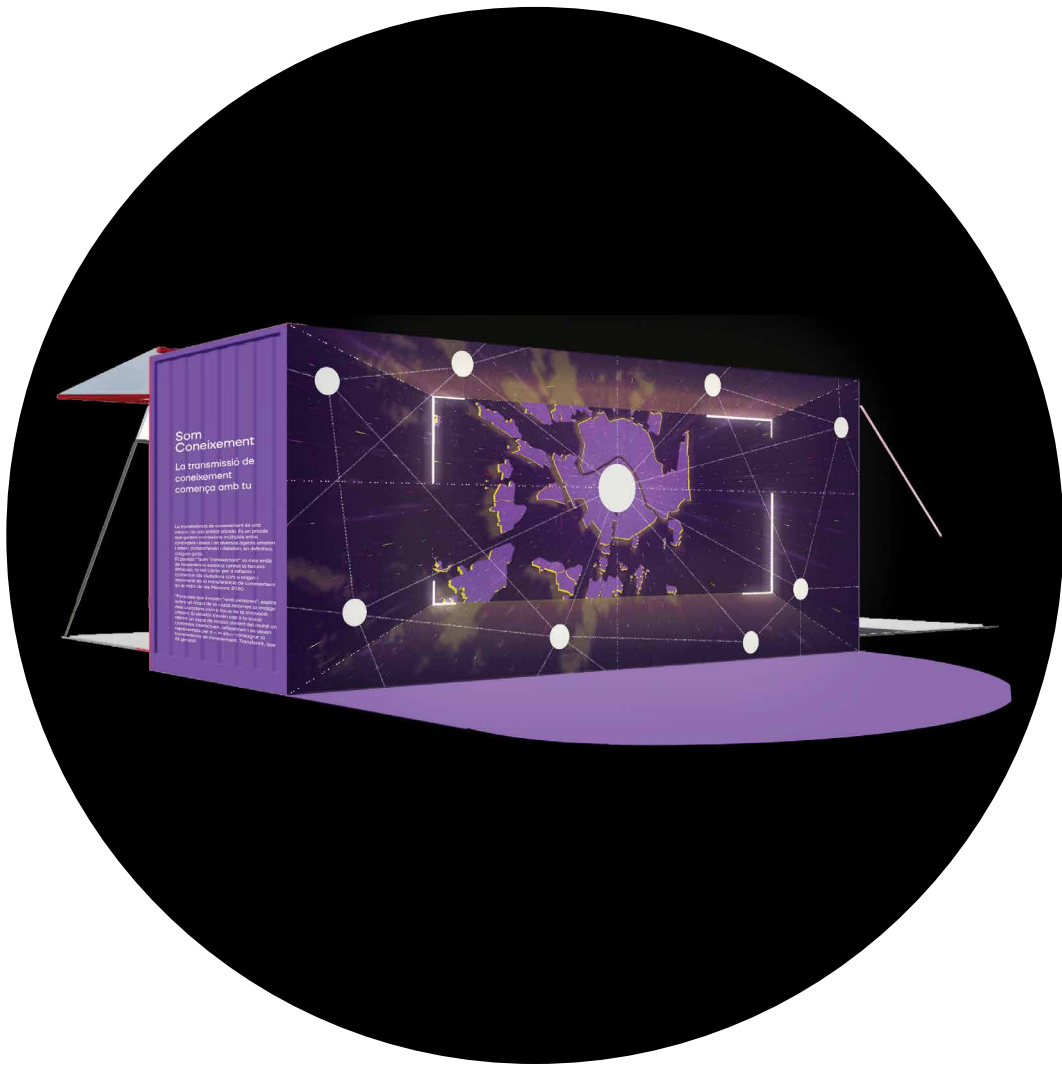
**FIG. 6.18** Concept drawing for the Agora pavilion design. A ship container opens up as a temporary exhibition space providing a sense of interiority through shadow, delimited flooring and seating options.



**FIG. 6.19** Situation drawing for the Agora pavilion design located besides the gate at the gardens of Universitat de València in the Tarongers Campus to attract students to visit and interact with the intervention.



**FIG. 6.20** Main image wrapping the Agora pavilion on "knowledge transfer". Citizens appear in the middle, reflected on a mirror connected in a web, overlaid with the map of the city as a knowledge transfer system the university and the city placing citizens in the centre.



**FIG. 6.21** Spatial intervention proposal for Agora. A pavilion made from a recycled ship container that hosts an exhibition and meeting space around a provocative speculative image on knowledge transfer between university and city.

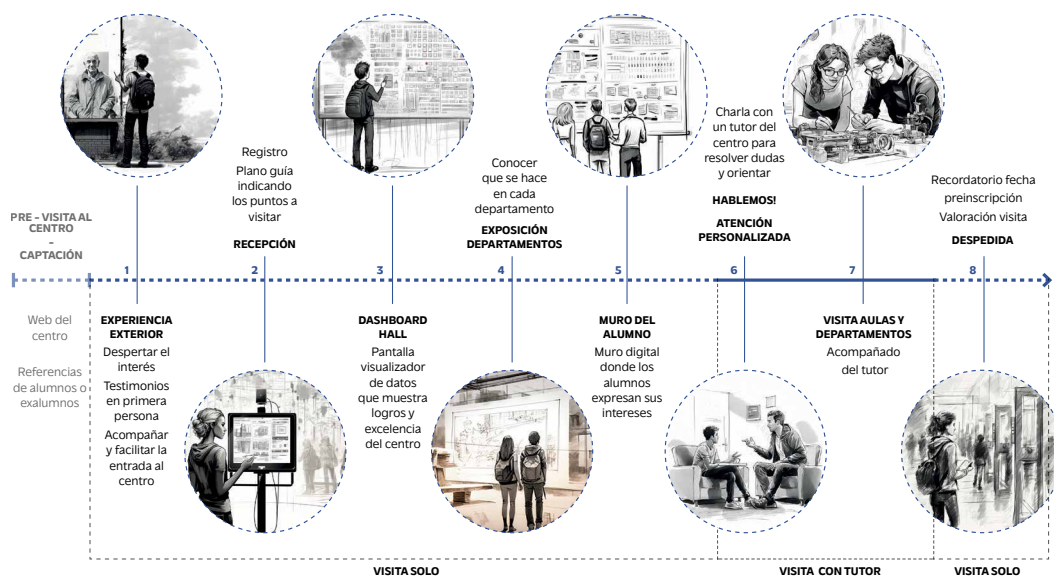
# Cotes Baixes



**FIG. 6.22** User experience journey of a prospective student approaching the IES Cotes Baixes. From the first impression of the centre through publicity to an interview with a career coach, the spatial milestones accompany the public experience.



**FIG. 6.23** Spatial journey and milestones of a prospective student approaching IES Cotes Baixes. A visitor to the centre crosses the exterior and interior spaces in a continuous public experience supported by technology.



**FIG. 6.24** Phase 1 of the Cotes Baixes project introduced a new entrance hall a student cantine and renewed teacher cafeteria and offices. A welcoming space that better represents the education community's values of technology and transparency in a comfortable interior.

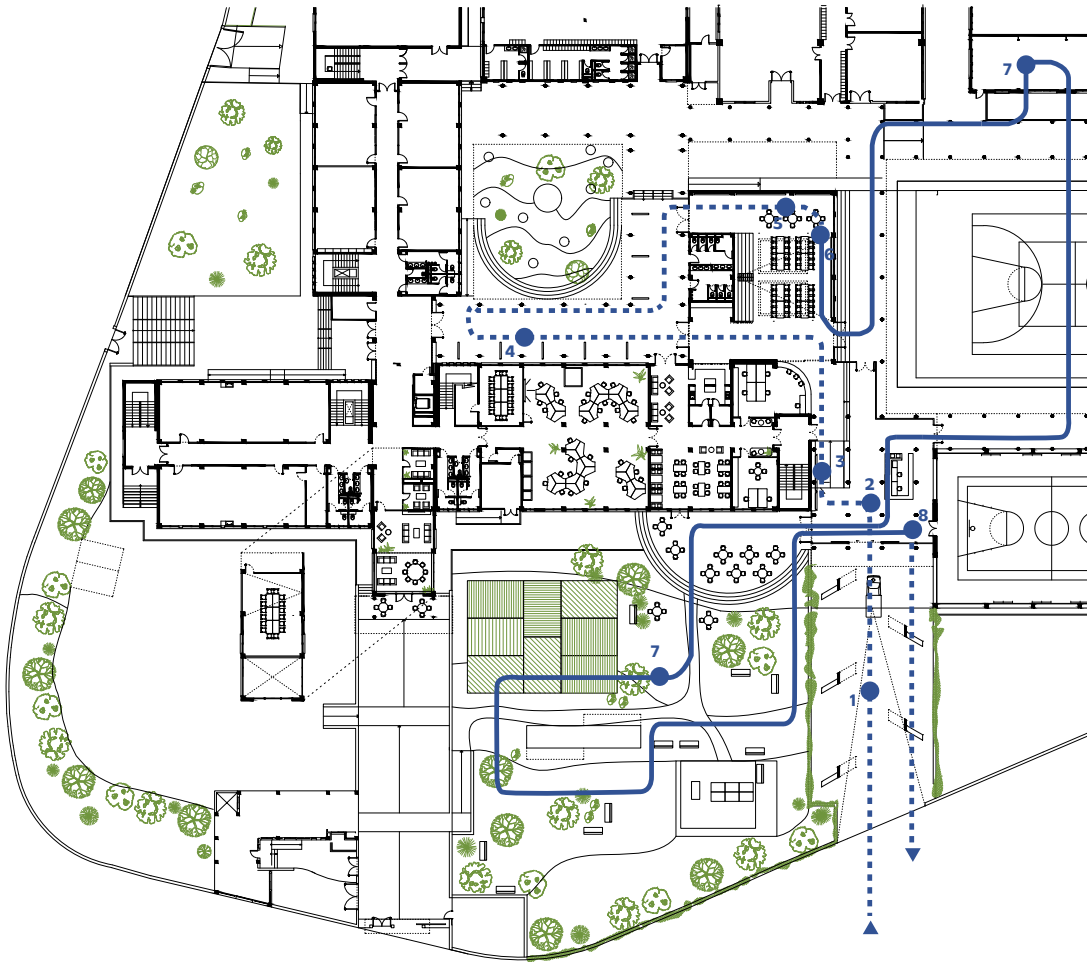
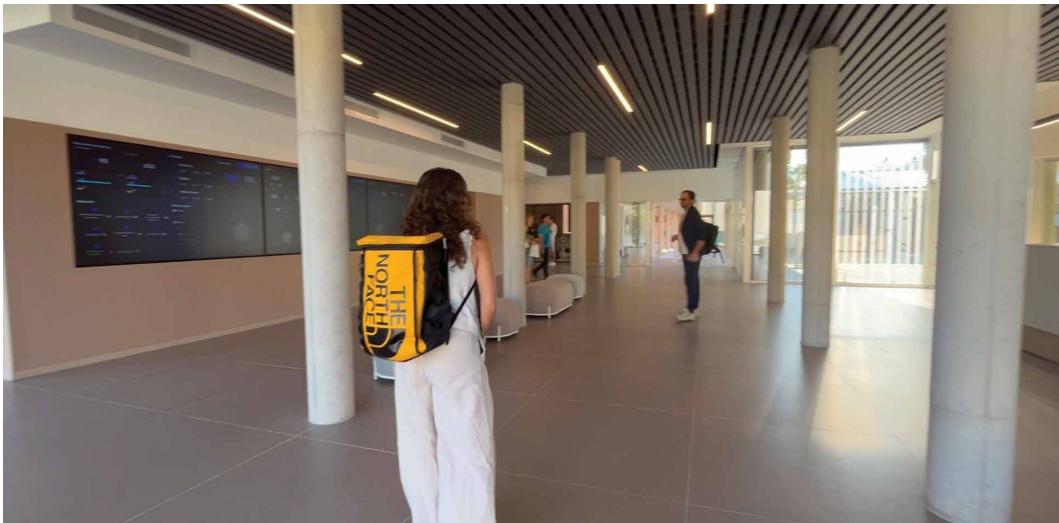
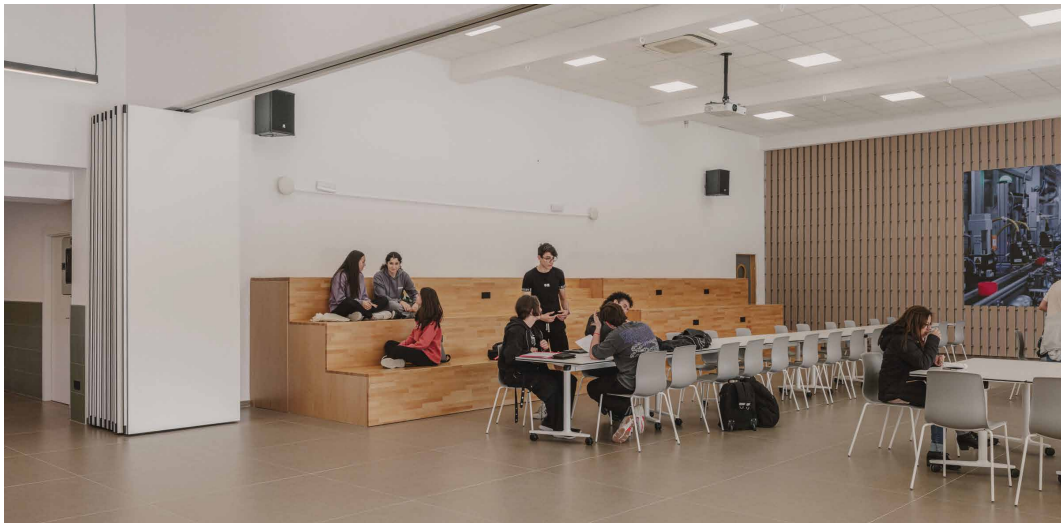


FIG. 6.25 Render showing the design intention to extend the public threshold from the school towards the city with artefacts combining digital installations and seating.



**FIG. 6.26** Cotes Baixes' entrance hall combines modern interior materials with a welcoming furnishing. The differences between the rendering and the realized design show how design iterations sharpened and improved the spatial design.



**FIG. 6.27** The student canteen became the heart of the public experience in Cotes Baixes. A space for presentations, meetings, lunch, games or theatre plays, thanks to a balance between fixed and adaptable elements. Source: ©Carlos Segura

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# 7 Conclusions

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Becoming Public Through  
Design Practice

This study explored how design can activate publicness in existing public interiors using design-driven methodologies. Following a non-linear trajectory, the research evolved through the iterative development of theory and practice, as embodied in design experiments. These situated spatial experiments investigated publicness conceptually and operationally using critical reflexivity to bridge the gap between theory and practice.

Instead of being defined a priori, the research aims and objectives emerged along the way and were refined through iteration and reflection. Initially, the designer/researcher began the research with the conviction that design had the power to activate public interiors through a particular approach to design, based on her previous experiences with co-creation. By the end of the trajectory, the findings confirmed this, forming a coherent framework.

The line of enquiry to extract the findings began by exploring the conceptual foundations of publicness and the conditions that enable or constrain it. Design experiments, such as those in Makerlab, demonstrate the role of collective creation in forming publics around shared matters of care in public interiors. Further testing in Limen proved the epistemic and operational power of spatial experimentation to both prove theoretical hypotheses and practically alter publicness. Finally, the cumulative cross-comparison of multiple experiments elucidated which design approaches contributed to activating public space and how the situated findings from the research could become transferable knowledge.

With the focus is on consolidating the experimental findings into a coherent synthesis, this chapter brings together the findings produced across the experiments to articulate their significance for public space theory, spatial design practice, and design research. Transitioning from experimental accumulation to conceptual consolidation, the findings paint a collective contribution through critical overlaying, comparison, and differentiation.

## 7.1 Consolidating the Findings

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The findings of this study offer insights from design experiments situated in time and space, designed and reflected upon by the author as a researcher/designer. The experiments consistently revealed that focusing on situated design experiments in public space, provided a practical ‘way of doing’ for designers, mobilising methods such as co-creation and spatial experimentation.

The findings can be grouped into themes, although their boundaries are neither rigid nor entirely discrete. First, experiments revealed publicness in existing public interiors functions as a dynamic threshold condition, continuously shaped by ongoing social, spatial, and institutional factors. Crucially, design was observed to influence this threshold by integrating these factors through relational, embodied, and embedded approaches.

Second, one of the tools that make it possible for design to alter publicness is collective creation. Collective creation supports the forming of publics around shared matters of care or cultural values. Maintaining design as a mediator between collective spatial aspirations and spatial interventions, co-creation articulates publicness before spatialisation, allowing citizens to collectively define their concerns before they are translated into spatial arrangements. The sequencing is important. This suggests that collective creation led by a designer supports publicness and guides it towards being materialised in space.

Third, design-driven spatial experimentation functions as a mode of enquiry through which theoretical hypotheses about publicness can be tested in real-life contexts through situated spatial experiments. After observation and critical reflection, the experimental results can lead to validation or expose productive tensions and limits that require further theoretical refinement.

Alongside these core findings, other supporting findings show complementary aspects of publicness. On the one hand, experiments proved that publicness can be activated in already existing public interiors, not only at entry points or spaces in contact with the façade. Also, apart from spatial interventions, different modes of enquiry such as speculative design, exhibition design, curatorial practice or architectural design can activate different degrees of publicness, independently of their degree of material implementation or permanence. Speculative and unrealised projects still generate publics, debates, and political insight.

That is, publicness design is design as politics. Publicness is extremely sensitive to political and governance shifts because of their entanglements to public values and matters of care.

A final unexpected finding arising from the layering of experimental results points to how research-by-design approaches, such as the one employed in this dissertation, transform the designer/researcher themselves. The author underwent a process of transformation, becoming a designer/researcher. By integrating research and practice, using transdisciplinary tools, and developing specific design approaches, the author submerged in an unforeseen, continuous, and creative process of transformation and change.

## 7.2 Interpreting Publicness Through Practice

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After articulating the experimental results as a collection of findings, it becomes relevant to move towards interpreting how the findings reposition theoretical and practical understandings. This study has implications for design and research practice because it proposes design-driven approaches that integrate ways of doing from both fields. Notably, spatial experimentation and collective creation surfaced as concrete transferable tools for public space design and research. Finally, a transversal reading shows the emergence of a becoming-designer/researcher, contributing to a more relational, embedded, and embodied role of the designer in public space.

## 7.2.1 Publicness as a Threshold Condition

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This study advances the theoretical understanding of publicness by demonstrating it as a dynamic spatial condition, conceptualising it not as a fixed entity but as a liminal transition process or ‘threshold’ occurring in a continuum between exterior and interior. This redefinition opposes static interpretations of public space by emphasising its emergent, relational and contingent nature.<sup>290</sup> In this respect, public thresholds are material and immaterial constructs that mediate the transition between private life and public engagement unfolding across urban, architectural, and interior scales of public interiors. These findings reposition publicness in public interiors as an emergent condition that materialises as a threshold continuously produced through spatial, social, and institutional negotiation.

The experiment of Limen proved, based on observation and reflection, a parallelism between the stages of liminality –separation, transition, and reintegration– through a spatial intervention composed of two artefacts facilitating access to a public interior. Makerlab foregrounded makerspaces as thresholds or spaces of becoming, where citizens transition from private learning to collective knowledge production when designed with publicness in mind.

Publicness is defined through spatial, social, and institutional conditions, some of which spatial design can influence. Spatial conditions, together with social norms, influence how people approach, access, or behave in space, shaping their engagement in public life. In addition, institutional conditions related to ownership, governance, and policy clearly shape the emergence and sustainability of publicness. Only the alignment of the three layers of publicness conditions can activate public space, forcing design to recognise and embrace social and institutional aspects as part of the field of work.

Public experience, or the perception of the public threshold, begins well before the façade and extends beyond it, indicating that publicness stretches beyond the urban and architectural domains. As shown by the Limen experiment, the public threshold begins when a public interior is perceived from an outdoor public space.<sup>291</sup> Then, the transition phase corresponds to accessibility and circulation in the building. This proves that to activate publicness, design should pay attention to multiple scales across the urban, architectural, and interior fields, rather than reducing publicness to openness, visibility, or focusing solely on the door.

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<sup>290</sup> All experiments, Chapters 4–6, evidenced that publicness is contingent to shifting social, spatial and institutional shifts.

<sup>291</sup> In Chapter 5, observational data showed a recurring pattern of citizens perceiving and approaching the artefact and therefore the building way before the actual built façade.

These results indicate that designing public thresholds requires combining purely material aspects of design with immaterial ones. Beyond doors and windows, lighting, material finishes, or furniture, public thresholds are shaped by the ways they incorporate cultural values and matters of care. In Makerlab, values such as identity, visibility, independence, and appropriation guided the spatial strategies that shaped the makerspaces long before material design decisions appeared, thanks to co-creation. Across all experiments, it has become clear that threshold design is a coordinated strategy in which material arrangements align with immaterial meanings.

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## 7.2.2 Design Factors of Publicness

Parallel to the liminal stages, there appear to be other factors affecting publicness: visibility, guidance, and affordance. Visibility is a precondition for citizens to perceive and feel invited to enter the public interior, consequently conditioning the modes of engagement. In Limen, the differences in engagement from one façade to the other highlight the importance of the public interior's entrance visibility and its urban positioning. Visibility is key at the exterior and interior boundaries of the public threshold, as shown in Makerlab. Makerspaces had a greater impact when they were visible within the library, facilitating transitions from the street to the library and from the library to the makerspace. Visibility is a form of guidance that supports liminal transitions at critical points in spatial experiences.

During the liminal transition happening in public thresholds, citizens require guidance in the form of reassurance, instructions, or permission, especially in the reintegration phase, once they are inside the building.<sup>292</sup> Reintegration after accessing the building is a design problem because publicness is sustained by what happens after crossing once inside. The material and immaterial elements shaping the threshold are crucial at this stage, since poor reintegration risks citizens' retreat and non-engagement in public life. The experiments show how wayfinding and signage, a welcome desk, or offering a cup of coffee can be elements that hook users to engage in public life. Sometimes, this implied that the necessary intervention was more graphical than spatial. For example, in De Hillevliet, signage on the façade was a necessary step to lower the threshold for citizens to enter the building.

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<sup>292</sup> In the limen experiment, Chapter 5, data showed a moment of vulnerability right after reintegrating, when coming out of the slide.

Once inside the public interior, design scaffolds individual experiences and accompanies citizens in their liminal transition. As the observations of the Limen experiment verified, users anticipate, require reassurance, imitate, hesitate, or retreat during the liminal transition to enter a public interior.<sup>293</sup> Designing symbolic meanings to accompany citizens, such as the shape of a stair, colour of a carpet, or wayfinding clarity, is crucial. This means that, in addition to the building envelope, other material and immaterial elements shape the threshold. Liminality expands the general understanding of public interior accessibility from a binary inside-outside condition towards one that cannot be reduced to the moment of entry.<sup>294</sup>

Public interiors provide affordances along the public threshold, from their access from the street to their interior activities. Once citizens are inside, the design must offer affordances to turn access into engagement. These affordances should be adapted to the public's diversity. Sliding through the window in Limen was clearly an affordance designed to engage children as the entry point to adults in the immediate community. In Makerlab, the affordances offered through programming and furnishing adapted to the public to expand participation and, therefore, publicness activation. In Valencia 360, a previously abandoned cafeteria was turned into a VR stage thanks to the design of immersive bubbles that afford citizens the opportunity to reflect on climate futures. Findings also show that collective behaviour affects engagement, meaning that people are more likely to access or engage when others are already doing so. This highlights the importance of visibility in public space design. Experiments in Limen, Makerlab, and Valencia 360 validated that seeing others use the space lowers the threshold to do the same.

Nevertheless, the findings show a major vulnerability in publicness activation: its sensitivity to governance issues. Institutional and political structures can be the death or life of publicness because of ownership, funding, or management shifts.<sup>295</sup> Although the actual ownership of a public space is irrelevant for its publicness, one of publicness' dimensions is management which directly depends on the will to allow for independent use. Accordingly, institutional support or the lack thereof can jeopardise publicness activation, as proven by the pilots in the Makerlab project, where the absence of institutional support sabotaged the makerspace's success.

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<sup>293</sup> An array of behaviours observed during the experiment supported their conceptualization as a liminality process, in Chapter 5.

<sup>294</sup> In Chapter 5, the observational data from the limen experiment proved the parallelism of public interior accessibility and liminality extending it as a process in space, and not a specific moment.

<sup>295</sup> Chapter 4 showed that the lack of institutional support hinders the long-term publicness activation, while Chapter 6, showed that political and governance changes can halt the implementation of publicness' interventions.

In contrast, in Cotes Baixes, it was only because of the institutional support of the school's management team that the project completely transformed the school's publicness by redesigning its public spaces around the visitor experience.

Publicness is closely related to political shifts which can halt or destabilise activation. Agora, for example, was not realised due to political change: the new local government did not want to activate the public debate around climate missions since it was not relevant to their political agenda. Therefore, design should frame publicness activation as contingent and time-sensitive, adapting the definition of “successful” outcomes to its fragility and temporality.

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### 7.2.3 Collective Creation and the Formation of Publics

Exploring how to productively engage spatial, social, and institutional layers, collective creation surfaced as a tool to map these layers through citizen engagement. During co-creative actions, citizens formed publics around their shared matters of care in public interiors.<sup>296</sup> In other words, they recognised each other as agents of that ecology and collectively agreed on their aspirations for that particular public interior. Beyond helping the designer dissect the conditions of publicness in that public interior, co-creation developed a sense of collective spatial ownership, which is crucial for the implementation and long-term sustainability of the public space.<sup>297</sup> The designer mediated and translated between the community and its aspirations and facilitated its implementation through technical support.

Both the study on stupidity and the experiments themselves showed the capacity of collective creation to create publics and shared ownership around public spaces. In the Makerlab project, where co-creation activities were iterated for the eight pilot libraries, each collective process transformed a working group into a public around the common concern of introducing making in their library. Through their activities and discussions, these publics co-defined the shared values, aspirations, and identities for the makerspaces rooted in their institutional, demographic, and local characteristics. Collective creation is not only a consultative or decision-making

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<sup>296</sup> Chapter 4 showed that co-creation sessions articulated dispersed stakeholders into a group with a common aspiration. In many cases, participants did not even know each other beforehand yet remained engaged after the workshops.

<sup>297</sup> In the experiments in Chapters 4, 5 and 6 the use co-creation during the pre-design phase proved to engage stakeholders and develop ownership around the spatial transformation. In that way, some experiments endured more lasting material and immaterial results.

space for stakeholders; it is a realm of collective problematisation in an ecology of human and nonhuman agents, where buildings, green spaces, local values, or personal stories affect each other as an interconnected network. Experiments demonstrate that collective creation's contribution lies in turning dispersed stakeholders into a public capable of collectively defining their problems together. Design solutions improve through collective creation because questions become sharper and collectively owned. Ownership, however, should not be confused with better designs. Co-creation's epistemic value precedes its design outcomes.

The sense of collective ownership derived from collective creation reshapes the definition of problems and the design of solutions. Through the process of becoming-public, solutions align with programming, institutional agendas, or local culture, ensuring better implementation. Design experiments in Makerlab attempted to reframe the brief of "what is making?" to the situation leading to makerspaces focusing on agriculture, migration, or teenagers, accordingly. Designs co-emerged from the collective definition of problems, not as negative challenges but as areas of interest. Nonetheless, collective processes always entangle conflict and disagreement, shaping both the process and outcomes.

Negotiation, conflict, and constraints sharpen design intentions rather than weaken them. On the one hand, the spatial negotiation of publicness entails conflict among agents based on such disagreements. That is why collective creation does not focus on designing together but on problematising together, shifting the focus to what the public has in common. Sometimes, even defining the problem is a challenge, and that is where the role of the designer as a mediator appears. Next to that, experiments have shown that budget, time, material, or governance constraints are intrinsic qualities of situated design processes and are not external limitations; rather, they are drivers of design.

Different publics have different experiences so designs must account for demographic diversity and embrace different forms of public engagement through tailored affordances. Age, gender, cultural background, and ability can powerfully shape perceptions and modes of engagement in public life and hinder the effect on publicness activation. In the design experiments, accommodating diversity began in the co-creation phase. Including broader perspectives in the design process facilitates the design of solutions that actually respond to diverse needs. A viable way to counteract the fragility of publicness to change is through collective creation as a way of producing publics around shared problems that will develop ownership to ensure long-term sustainability.

Even if collective creation catalyzes transformation by establishing the public around a problem, the actual transformation towards publicness activation takes place by its translation to spatial interventions. Design mediates between the public and the values distilled in co-creation, articulating them in space to engage a wider public. If the spatial translation of public values is missing, publicness activation is insufficient. Connecting design action as a generative framework foregrounds design experimentation as a mode of enquiry.

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#### 7.2.4 **Spatial Experimentation as Mode of Enquiry**

The experiments in this study substantiate that spatial design experiments are valuable for testing hypotheses in real life. Across the implemented and non-implemented design experiments, it became clear that spatial interventions, speculative design, and artefacts can become research instruments embodying research hypotheses. Particularly, the temporary intervention in Limen revealed clear findings on the parallels between public interior accessibility, liminality, and thresholds within a short timeframe. In experiments where the design was not implemented, the hypotheses were theoretically verified using inference and critical reflection. In experiments where the experiments were realised, knowledge appeared through the embodied interaction between agents: artefacts, users, buildings, and objects.

Situated knowledge emerges from the relational, embodied, and embedded nature of design experiments. Design-driven research bolsters the revelation of the public dimension in space by materialising them into artefacts and interventions. Through these experiments, the abstract dimensions of publicness were reinterpreted through spatial interventions. For example, in Valencia 360, the private bubble defined by Sloterdijk surfaces as a capsule where citizens privately reflect on urban futures detached from the surrounding reality while still being connected to the public sphere. In Agora, the concept of knowledge transfer between the university and society turned a ship container into an exhibition and discussion space to assemble citizens around shared matters.

It can be argued that design experiments were limited by their temporality and reversibility. Still, precisely these characteristics facilitate exploration, allowing for flexibility and adaptability, which appeared in experiments as enablers of publicness.

Temporary interventions expose spatial dynamics otherwise difficult to show supported by methodological and spatial experimentation which allows for quick testing, unlocking iterative testing as a knowledge production tool. Iteration becomes a mechanism by which knowledge emerges from cyclical testing, adaptation, and reflection and temporality functions not as a limitation but as an epistemic amplifier.<sup>298</sup>

Working with real-life experiments such as Makerlab or Limen, the iterative adaptation to evolving problematisation and publics sharpened designs and findings. In contrast to long-term renovations, the temporary interventions of Limen and Valencia 360 concentrated publicness dynamics within short periods, making behavioural shifts visible almost immediately clarifying mechanisms that permanent interventions tend to oversee.

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### 7.2.5 Practical Design Approaches for Publicness Activation

A design approach can be understood as an overarching conceptual orientation that frames how design problems are perceived and addressed, and informs the designer's ways of thinking, positioning, and doing. Approaches became apparent because of the overlap in the experimental findings. First, lowering or extending thresholds is a good strategy for tackling the challenge of interior publicness. Furthermore, spatial elements of all sizes, such as coffee machines or posters, can impactfully shape publicness if they are accompanied by multiscale designs bridging urban, architectural, and interior design.

Both theory and experiments confirm that thresholds are a good conceptualisation of publicness. In most experiments, users mentioned a need “to lower the threshold” that is, to make the public interior more accessible. Design strategies to lower the threshold are manifold and often revolve around accessibility, visibility, positioning, publicity, or legibility, activating the publicness of the space. A less evident strategy was to extend the threshold towards public space, bringing it closer to citizens. In Limen, the public interior flooded into the city with carpets and artefacts catching passers-by attention. Thus, liminality extended across the urban-interior continuum of public interiors. Spatial elements, such as artefacts of furniture, frame the threshold and guide users towards the other side.

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<sup>298</sup> See Chapter 5, where the temporary Limen intervention enabled the observation of citizen's behavioural responses across liminal stages, and Chapter 6, where short-term installations exposed publicness dynamics.

Alongside the spatial strategy, elements populating the public interior, such as furniture, signage, lighting, and objects, are crucial to its activation. Small interventions, such as warmer lighting, a welcome desk, lobby seats, or clearer wayfinding, can drastically improve a space's publicness, as ratified by the designs in De Hillevliet or Makerlab. These elements, which architecture and urban design often disregard as secondary, decorative, or atmospheric, can be as powerful in activating publicness as larger-scale material-built interventions.

Because publicness develops across different urban, architectural, and interior scales, intervening in the threshold requires blending these disciplines and scales. Integrating tools and techniques from these disciplines with other less evident ones, such as graphic, wayfinding, or exhibition design, can activate publicness across scales. Valencia 360 – exhibition curatorial practice and design–, Agora –graphic design and pavilion–, Cotes Baixes –user experience UX– or De Hillevliet –furnishing and signage– show how publicness benefits from a transdisciplinary approach to design.

Similar design approaches have proven effective in activating publicness across experiments, yet all of them were situated or context-related, heavily depending on spatial, institutional, and social constraints. The transferability of the findings lies in the design and research approaches shaped by the situated conditions rather than being detached from them.<sup>299</sup>

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## 7.2.6 Becoming a “Designer-Researcher”

Beyond its conceptual, practical, and methodological contributions, this research also produced an unexpected finding concerning the transformation of the author through the research process itself. Through the ongoing reflexive practice of situated design experiments, it became evident that design-driven research not only generates knowledge about publicness but also actively reshapes the positionality, capacities, and ways of doing of the author converting into a designer/researcher.<sup>300</sup> Knowledge production and personal positioning unfolded together, often in ways that only became apparent retrospectively.

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<sup>299</sup> In Chapter 6, cross-comparison demonstrated recurring strategies across the different experiments beyond the design results.

<sup>300</sup> Especially in Chapter 6, differing levels of designer agency produced distinct levels of publicness activation. Usually, more embedment produced more transformation: of the space and of the designer/researcher themselves.

Such transformation appeared through the continuous intertwining of research and practice over time, in a repeated back-and-forth between theoretical framing and design experimentation, and repositioning within the situated context. The author occupied multiple overlapping and coexisting roles as an activist, designer, facilitator, mediator, or participant, shaped by the specific demands of the experiments. As a result, the research process functioned as an open and evolving trajectory in which knowledge production and subject formation developed together.

This finding resonates with Deleuze's concept of becoming, understood not as a passage from one fixed identity to another but as an ongoing process of differentiation produced through relations, affects, and encounters. From this perspective, the designer/researcher is not a stable subject who just accumulates skills or insights over time. Its positionality and roles are continuously reconfigured through a multiplicity of entanglements and affects. Therefore, becoming-designer/researcher is a condition of responsiveness and openness to transformation.

Relational and posthuman theories offer further insight into the processes of becoming by challenging the notion of the designer as an autonomous agent. Design experiments and co-creation processes formed assemblages in which agency was distributed across human and nonhuman actors, including citizens, institutions, artefacts, objects, buildings, and spaces.<sup>301</sup> Within these assemblages, the author was fully embedded in that network of affects, being shaped by the same forces that influenced the projects' spatial outcomes.

A transversal reading of the dissertation suggests that becoming a designer researcher was central to the research. It constituted a central dimension of the research itself. The gradual shift towards a more relational, embedded, and embodied role of the designer mirrors the broader theoretical re-framing of publicness as a relational and situated condition. Just as publicness emerged through thresholds, the position of the designer researcher took shape through continuous negotiation between theory, practice, and context, making knowledge emerge through this particular entanglement.

Implications for design-driven research suggest that research by design should not be assessed solely in terms of its outputs or transferable results. Attention should also be paid to its capacity to cultivate situated forms of becoming. Becoming a designer researcher is an outcome of a research process that recognises subjectivity, entanglement, and transformation as conditions of knowledge production.

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<sup>301</sup> Chapter 3 proposed the hypotheses that, in co-creation, the author is an embedded actor in an assemblage, which was later proved in the experiments by the co-evolution of the processes, the design and the designer.

In this sense, the dissertation does more than document a series of experiments on publicness because it traces how a particular mode of enquiry reshapes the researcher's position within the field. Becoming-designer/researcher emerges as a contribution in its own right, reinforcing the argument that design-driven research operates as a stand-alone research methodology, producing singular transdisciplinary contributions.

## 7.3 Boundaries of Situated Design Knowledge

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This dissertation is based on a series of situated, design-driven experiments conducted in real-world settings. Such close engagement with design practice is precisely what gives the work its depth and relevance. At the same time, it also demands an explanation of its boundary conditions to facilitate transferability.

Situated findings implies that the transferable knowledge resides in the design and research approaches and methods rather than in replicable solutions.<sup>302</sup> Each experiment was embedded in a local ecology with specific challenges which differ from each other; thus, their design outcomes are situated. It must be noted that the role of the author as a researcher/designer cannot be easily separated from the design outcomes. Therefore, these outcomes can be refined to extract approaches by breaking them down into strategies, elements, conditions, factors, tools, and techniques, which are easier to apply to different contexts by different researchers/designers. In the process of abstracting the research transferability, situated constraints and conditions cannot and should not be separated from design outcomes because of their generative power.

Hence, the transferable part of this study is a way of working, a mode of enquiry through design approaches that could be applied to other spatial design challenges. A repeatable mode of practice. Conversely, recognising the novel findings of this study requires explicit acknowledgement of its limitations.

From the many design experiments, only a few have been fully implemented and turned into actual spatial interventions. This means that the full potential of real-life spatial experiments has not been fully deployed. In addition, each experiment was embedded in a specific institutional, cultural, and urban context, with most

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<sup>302</sup> In Chapter 6, beyond the specific design results, the comparative analysis of multiple experiments highlighted recurring design strategies across the different experiments.

taking place in cultural buildings in (North-)Western European cities. While the cross-comparison of experiments made it possible to identify recurring patterns and shared design approaches, these insights cannot be generalised or universalised in a positivist sense. Instead, they are best understood as situated insights that require careful reinterpretation to be applied in other contexts.

Closely related to this contextual limitation is the question of temporality. Several experiments involved temporary or short-term spatial interventions which effectively revealed how publicness can emerge and be activated, but ultimately only offered a snapshot in time. What remains less clear is how such effects would persist once the spatial intervention is removed or absorbed into everyday use. As observed throughout the study, publicness is a dynamic condition, making it difficult to fully capture it within the limited timeframe of a design experiment.

Another important limitation lies in the author's dual role as both the designer and researcher. This position functioned as a double-edged sword. On the one hand, it enabled close engagement with the design process, the stakeholders, and the situated realities of each experiment. However, the experiments and their reflections were inevitably shaped by the author's own perspectives and sensitivities, making it challenging to disentangle the general from the particular. Although critical reflexivity explicates the designer's positionality, it cannot eliminate bias; it can only make it visible and open to scrutiny. In addition, some experiments unfolded within institutional partnerships, including funding, which inevitably influenced the scope of the work, the framing of the problem, and the possibilities for implementation.

Furthermore, this study deliberately used qualitative and design-driven forms of evidence. While this aligns with the research design, some experiments could have been supported by complementary quantitative data, such as post-occupancy evaluations. Quantitative methods were intentionally excluded from the scope of this study, but their absence could be interpreted as a constraint.

Taken together, these limitations clearly point toward directions for future research. Longitudinal studies, for instance, could follow design experiments over extended periods of time to examine whether those moments of activated publicness translate into lasting changes once the interventions are finished. In addition, transdisciplinary studies combining experts and evidence from fields such as sociology or interior design could expand the findings of this study. In addition, different social, political, and cultural conditions may challenge the mechanisms observed here and enrich current assumptions about thresholds, collective creation, and publicness. For example, by testing the identified design approaches across different building typologies and contexts, such as stations, hospitals, administrative buildings, or non-European settings.

Future research could also explore combinations of design-driven approaches with mixed methods. Quantitative data, digital sensing technologies, or participatory evaluation tools could complement observation and critical reflexivity as evaluation techniques without undermining the experiment's exploratory and situated character, showing patterns that remain difficult to perceive through human observation alone.

Finally, theoretical deepening could delve into the socio-political aspects of publicness. Across the experiments, questions of inclusion and exclusion, and institutional power and fragility emerged repeatedly but were not always fully resolved. A closer examination of how design approaches intersect with policy and governance structures may shed light on where spatial activation encounters its limits and under what conditions it might endure.

Taken together, these considerations suggest that the findings of this dissertation are best read not as closed conclusions but as open propositions for further continuation through critique, adaptation, and expansion across different contexts, scales, and disciplinary perspectives.

## 7.4 Towards Design Approaches for Publicness

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The primary contribution of this dissertation lies in articulating situated, rather than predefined, design approaches. Approaches to designing public spaces as thresholds, based on collective creation, multiscalar thinking, transdisciplinary tools, and spatial experimentation, propose ways of doing that must be adapted to the situatedness of each context. These approaches shape how designers engage with publicness and how design work is positioned in relation to social, spatial, and institutional conditions. Framed in this way, the contribution clarifies that approaches, and not predefined methods, guide design practice which is supported by tools and techniques contingent to the situatedness of design.

After discussing the findings of this study on publicness activation and their limitations, the following question is what these mean for design research and practice. This study set out to explore how to activate publicness in existing public interiors through design-driven approaches, as the dynamic nature of publicness demands approaches that embrace such conditions. Especially the relationship between publicness and exterior and public interior, was under-theorised yet increasingly relevant.

In the context of densifying and hyper-diverse cities, designing public spaces that contribute to social inclusiveness and well-being is the cornerstone of architectural and urban design practice. The current research furthered the understanding of how spatial design can alter publicness. Such a task requires a radically different research approach grounded in the author's design practice based on real-life design experiments exploring publicness activation.

The study concludes that public interiors, traditionally viewed through public-private binaries, are better understood as dynamic threshold conditions characterised by liminal transition processes. Liminality provides a powerful analytical framework underscoring the necessity of designing public spaces as adaptable processes and not static objects, and demanding transdisciplinary approaches across urban, architectural, and interior design.

Spatial experiments in this study scrutinised various stages of liminality. Limen established a parallel between liminality and public life and made it visible in space. As a follow-up to Limen, de Hilleliet showed the importance of guiding citizens during the transition from the street, across the façade, through the vestibule, and towards the

entrance hall. Finally, although previously performed, Makerlab proved the importance of design in the phase of reintegration, once at the other side of the threshold, by providing affordances for engagement and interaction. Design plays a crucial role in all these stages by providing the conditions for the emergence of publicness.

Exploring design through design enabled knowledge to emerge through the actual doing. Spatial experiments tested hypotheses in real-life contexts, which rarely occurs in architecture or urban design. Experiments are instruments for producing embodied, relational, and situated knowledges, re-framing temporality and iteration as productive rather than limiting design research. The experiments and the designer's situatedness proved to be crucial for producing knowledges connected and relevant to real-life urban environments, not a bias to eliminate. The approach also showed the relevance of critical reflexivity and explicit positionality for design research to be transferable when the author holds a dual role as a researcher/designer.

Cross-comparing the experiments, where the only constants were the author and the topic of publicness, allowed us to observe and isolate the common design approaches. There is tremendous potential for spatial designers to implement approaches centred on knowledge production, such as the one presented here, especially in design education, where designers explore theoretical assumptions in space through a relational, embedded, and embodied critical practice. Equivalently, research could benefit from including spatial experimentation to substantiate theoretical principles. Ideally, the theory and practice of public space could establish a common realm of shared practices and exchanges to tackle the urban challenges of our time.

Through design-driven experimentation, concrete advancements for design practice come to the surface: a multiscalar approach to public interior design, co-creation as a tool for publicness, design strategies for the public threshold, and a shift in the designer's roles and response-abilities. First, the need to design publicness across scales (urban, architectural, and interior) urges designers to work transdisciplinarily by including multiscalar material and immaterial elements (such as furniture, signage, lighting, and artefacts). Then, collective creation appears as a tool to create publics around shared matters of care, which, when spatially translated by design, can lead to increased publicness and more inclusive public spaces. To design a public threshold, this study proposes strategies to lower, extend, or support it, which are directly applicable to public building design. Finally, the findings illustrate a shift in the designer's role from an object maker to a process facilitator mediating in a situated ecology.

Ultimately, this body of work contributes to public space theory and practice, liminal studies, and design research, particularly in architecture and urban design. Operationalising the concept of public thresholds as an analytical and design

framework supports the importance of public interiors for inclusion and public life. Establishing a parallel between liminality and public interior accessibility translates the metaphor into space and expands the field of liminal studies.

Exemplifying ways to generate knowledge from situated spatial practice strengthens design's position as an independent and mature mode of enquiry, reinforcing its recognition in academic environments. Overall, these contributions empower productive new research avenues around publicness, accessibility, and inclusion emanating from theory, design, or hybrid perspectives.

Hopefully, this study will stimulate research and design to embrace more experimental ways of exploring urban futures. Speculation and artefacts can become generative frames for rehearsing the future in the present. Through exploratory ways of doing, public interiors could become testing grounds for new forms of collective life and the production of cultural values. For this purpose, designers should work more experimentally, transdisciplinary, and relationally, shifting the focus of design practice from solely aesthetics to "ethico-aesthetics". Favouring process over product and values over composition dilutes notions of intelligence, beauty, or authorship in design, advocating instead for embeddedness, humility, mediation, or even anonymity for the common good.

For their part, future spatial design researchers should embrace design as a totally rigorous mode of enquiry, welcoming the powerful fragility derived from contingent, political, and temporary conditions to create spatial possibilities. In a metaphorical sense, this dissertation forms itself a liminal space, a transition made by the author between architecture and urban design, between being a researcher and a designer, and a process of becoming through making. This establishes a vital transdisciplinary threshold that invites architects, urbanists, and researchers to embrace experimental, relational, and 'ethico-aesthetic' approaches, fostering collective engagement and shaping more inclusive and dynamic urban futures.





# Curriculum Vitae

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### Education

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|-------------|--|
| <b>2026</b> | <b>Ph.D. in Architecture.</b><br>Delft University of Technology. The Netherlands<br>Thesis Title: "Public Thresholds: Activating Existing Public Interiors through Spatial Experimentation"<br>Promotors: Dr. Arch. R. Cavallo; Dr. ir. M.G.A.D. Harteveld |
| <b>2016</b> | <b>MSc in Architecture.</b><br>University of Technology (TU Delft), The Netherlands<br>Thesis Title: Together: Participatory methods in Architectural Design<br>Mentors: R.J. Nottrot; Dr. R.C. Rocco<br>Graduation with Honours (8.0)                     |
| <b>2013</b> | <b>Bachelor of Architecture</b><br>Escuela Técnica Superior de Arquitectura de Valencia (ETSAV), Spain   |

## Academic Experience

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- 2022 – 2024**      **Researcher**  
digiNEB: A Digital Ecosystem for the New European Bauhaus, Europe
- 2021 – 2022**      **Researcher**  
MAKERLAB Project: Makerspaces in Libraries  
Delft University of Technology, The Netherlands
- 2017**              **Researcher**  
Alamar New Town Festival. Havana, Cuba.  
International New Town Institute, Rotterdam, The Netherlands

## Academic Engagement & Contributions

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### Organizer

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- 2024**              CA<sup>2</sup>RE / Valencia : EXPERIMENTATION. School of Architecture – Universitat Politècnica de València, Spain

### Presenter

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- 2023**              CA<sup>2</sup>RE / Zagreb: INTERSECTIONS. 9–11 November 2023, University of Zagreb, Faculty of Architecture, Zagreb, Croatia
- CA<sup>2</sup>RE / Aarhus: EXCHANGING  
13–15 April 2023, Aarhus School of Architecture, Aarhus, Denmark
- 2022**              CA<sup>2</sup>RE / Glasgow: FRAMING AND REFRAMING  
3–5 November 2022, Glasgow School of Art, Mackintosh School of Architecture, Glasgow, United Kingdom
- CA<sup>2</sup>RE / Delft: RECOMMENDATION  
7–9 April 2022, Delft University of Technology, Faculty of Architecture and the Built Environment, Delft, The Netherlands

**2021** CA<sup>2</sup>RE / Ljubljana: REFORMULATION  
11–13 November 2021, University of Ljubljana, Faculty of Architecture, Slovenia

CA<sup>2</sup>RE / Hamburg: REFLECTION  
15–17 April 2021, HafenCity University Hamburg, Hamburg, Germany (Online)

NEB Goes South – *Framing Collectivity*  
15–17 October 2021, University of ZagrebCroatia (Online)

NEB Goes South – *Kilometre Zero Architecture*  
14 December 2021, Polytechnic University of Valencia (Online)

Guest Lecturer

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**2025.** NEBgS BIP Valencia, Polytechnic University of València, Spain

**2025** BAU, Barcelona, Spain

**2024–2025** Escola Sert, Barcelona, Spain

**2016–2018** Urbanism Summer School- Delft University of Technology, The Netherlands

Speaker

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**2024** REBUILD Conference, Madrid, Spain

**2023** Smart City World Congress (SCWC), Barcelona, Spain

Guest Critic

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**2021** Universidad CEU Cardenal Herrera, Valencia, Spain

**2020** Catholic University of America, Washington D.C., United States

## Professional Experience

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2020 – present	<b>Spatial Designer</b> Iamardebe. Valencia, Spain
2018 – 2020	<b>Architect</b> Vakwerk Architecten. Delft, The Netherlands
2018	<b>Architect</b> RAU Architects. Amsterdam, The Netherlands
2017 – 2018	<b>Architect</b> Laura Álvarez Architecture. Amsterdam, The Netherlands
2018	<b>Architectural Intern</b> Theo Kupers Architecten. Rotterdam, The Netherlands

## Awards and Honours

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2022.	Fellowship Grant, Museum Boijmans van Beuningen, Rotterdam.
2016	Honourable Mention, Master Thesis. Delft University of Technology
2012	Selected for the Annual Project Selection publication, ETSAV.

## Skills

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<b>Professional</b>	Architectural Design, Urban Design, Interior design, Co-creation, Public Speaking, Transdisciplinary collaboration,
<b>Languages</b>	<b>Spanish</b> (Native), <b>Catalan</b> (Native), <b>English</b> (Professional), <b>Dutch</b> (Professional), <b>French</b> (Advanced)

# List of Publications

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## Journal Articles

Harteveld, Maurice, and Mar Muñoz Aparici. 'Overcoming Disciplinary Stupidity: Collective Creation for Diversity and Inclusion in Public Space Design'. *Footprint*, no. 36 (2025). <https://doi.org/10.59490/footprint.19.1.7490>.

## Book Chapters and Edited Volumes

Muñoz Aparici, Mar, Roberto Cavallo, Maria Tome Nuez, et al. *Transferring Innovation Best Practices - An Open Access Book on the Results of the DigiNEB Project*. Delft University of Technology (TU Delft), 2025. <https://doi.org/10.5281/ZENODO.14898689>.

Muñoz Aparici, Mar, and Débora Domingo-Calabuig. 'Local Variables Identification in Participatory Urbanism: Recent Case Studies in Valencia'. In *La Maieutica Della Città*, edited by Francesco Saverio Fera. AION Edizioni, 2023.

Mostert-van der Sar, Manon, Mar Muñoz Aparici, Marjolein Hermans, et al. *Handboek Makerlab: Maakplaatsen in bibliotheken*. 2023. [https://pure.tudelft.nl/ws/portalfiles/portal/159241498/handboek\\_makerlab.pdf](https://pure.tudelft.nl/ws/portalfiles/portal/159241498/handboek_makerlab.pdf).

## Conference Proceedings

Domingo Calabuig, Débora, Marta Fernández Guardado, and Mar Muñoz Aparici, eds. *CA<sup>2</sup>RE - Conference for Artistic and Architectural Research. EXPERIMENTATION*. edUPV - Editorial de la Universitat Politècnica de València, 2024. [https://ocs.editorial.upv.es/index.php/CA2RE/CA2RE\\_Valencia/paper/view/20450](https://ocs.editorial.upv.es/index.php/CA2RE/CA2RE_Valencia/paper/view/20450).

## Conference Papers

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Muñoz Aparici, Mar. 'Design Factors for Cultural Building Activation: Experiments Between Public Space Theory and Architectural Practice'. In *CA2RE+ Delft Recommendation*, edited by Roberto Cavallo, Alper Alkan, and Joran Kuiper. TU Delft OPEN Publishing, 2023. <https://doi.org/10.59490/mg.61>.

Muñoz Aparici, Mar. 'Makerlabs: Makerspaces in Libraries as Modern Spaces of Urban Belonging'. In *CA<sup>2</sup>RE+ 3 – Frameworks of Design-Driven Research*, edited by Ignacio Borrego, Ralf Pasel, and Jürgen Weidinger. Berlin Universities Publishing, 2023. <https://doi.org/10.14279/DEPOSITONCE-16476>.

Muñoz Aparici, Mar. 'Public Thresholds: Experimenting with Public Value Creation through Spatial Interventions in Public Buildings'. In *CA2RE / CA2RE+ Hamburg: Conference for Artistic and Architectural Research - Book of Proceedings*, edited by Matthias Ballestrem and Marta Fernández Guardado. HafenCity University, 2021. <https://doi.org/10.34712/142.18>.

Muñoz Aparici, Mar. 'El Saler per al Poble: Architecture and Political Transformation in Spain through the Planning Project of La Dehesa de El Saler'. *17<sup>th</sup> IPHS Conference History-Urbanism-Resilience*, 2016.



# Public Thresholds

Activating Existing Public Interiors through Spatial Experimentation

**Mar Muñoz Aparici**

Activating public life in space has been a concern in architecture and urban design, particularly within the liquid conditions of late modernity, where the separation between public and private are continuously blurred. While theoretical discourse has shifted towards relational and dynamic understandings of publicness, design practice struggles to intentionally activate public life, especially within existing public interiors, revealing a gap between theoretical and spatial practice. This dissertation addresses this gap by exploring how design approaches can activate publicness in existing public interiors, adopting design-driven research (DDR) as a methodological framework, positioning design as an independent mode of enquiry. Through a series of situated spatial experiments, the research investigates how publicness can be activated in specific contexts to extract knowledge through iterative cycles of design, implementation, observation, and critical reflexivity.

Cross-comparing and overlaying the design experiments, the findings conceptualise publicness as a dynamic threshold condition that emerges from the relations in an ecology of people, objects, nature, space, and institutions, that can be shaped through processes of spatial transformation. A key mechanism to articulate publicness in processes of spatial transformation proved to be collective creation: a tool for forming publics around shared matters of care through collective problematisation. Finally, the research contributed to design research by showing the capacity of design-driven spatial experimentation to produce situated and transferable knowledge. It also contributes to public space theory and design by reframing publicness as a relational process shaped by relational, embedded and embodied design approaches allowing designers to intentionally engage and activate it within existing public interiors.

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