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School of Architecture

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Royal College of Art

**COLLABORATIVE ARCHITECTURE BARCELONA:
THE ARCHITECT AS ENABLER**

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Doina Petrescu examiners and Dr. Catherine Dormor the chair.

DECLARATION

This thesis represents partial submission for the degree of Doctor of Philosophy at the Royal College of Art. I confirm that the work presented here is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

During the period of registered study in which this thesis was prepared the author has not been registered for any other academic award or qualification. The material included in this thesis has not been submitted wholly or in part for any academic award or qualification other than that for which it is now submitted.

LIST OF ACCOMPANYING MATERIAL

Body of practice: Collaborative Architecture Toolkit:
a Methodology

ABSTRACT

The way in which architecture understands itself as a discipline and a practice is changing due to a growing involvement of community organisations in city design. Among the many cities where this shift is taking place, the socio-political and architectural contexts that shape it are studied in Barcelona. The design thinking of the celebrated Barcelona Model that once transformed the city during the 1980s-90s was unable to address the urban problems that resulted from the real estate speculation and the 2008 financial crisis, which led to a rise of social movements. Community architects demanded the politicisation of architecture at all levels and stronger, socially committed agendas. Framed by calls for a right to the city, social justice and environmental sustainability, young architects have started to advocate architecture as a tool for social transformation and a redefinition of architectural practice.

This thesis explores the impact of collaborative practices within and beyond the discipline of architecture by studying protocols of civic engagement. Analysing architecture as a (collaborative) process rather than as a product, this thesis closely studies how collaborative practices are redefining boundaries between the architectural project, social modes of government and urban policy-making. It does so by focusing on the role of community architects' as enablers who challenge existing power relations, knowledge asymmetries, professional expertise and uneven responsibilities in the making of architecture.

This PhD works at the intersection of practice and theory, using a practice-based research and inductive mixed-methods

approach that includes Participatory Action Research (PAR), qualitative research and theoretical research. A Toolkit for Collaborative Architecture is developed to document and analyse collaborative practices, design tools and methods. The Toolkit structures a theorisation of practice and is a means to analyse and reflect on practice processes or outcomes through the use of case studies or live projects. Through the Toolkit and PAR, collaboration as developed as a mode of production has been both the analysed topic and a fundamental research process of this thesis.

This thesis contributes to the theory and practice of architecture by providing an analysis of a disciplinary shift in architectural practices brought about by collaborative practices (from traditional studios to collectives, associations and workers' cooperatives), new production processes (architects' new roles as enablers using collaborative design methods, and the design opportunities that emerge from these), and outcomes (both spatial and non-spatial). At the same time, the Toolkit makes a methodological contribution to analysing and instrumentalising practice in research while offering a projective tool that aims an impact in further architectural collaborative practices.

KEYWORDS

collaborative design, urban governance, social movements, community-led design, cooperative housing.

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I.

INTRODUCTION

15 MAY 2011: A SOCIO-POLITICAL SHIFT

The inability of traditional disciplinary tools in architecture to adequately respond to social demands resulting from the economic crisis in 2008 led to a rethinking of the discipline in Barcelona. The housing crisis during the real estate bubble (1997–2008) was followed by an economic crisis when the bubble burst in 2008, which was met by the Spanish government with austerity measures and unprecedented social welfare cutbacks. The economic crisis soon turned into a social and political one.

Social discontent with the traditional political system was clearly symbolised by the occupation of public space that began on 15 May 2011 across the country – in some cities this led to episodes of evictions and reoccupation (Antentas, 2011; Ramírez Blanco, 2021). This became known as the 15-M Movement, or the *Indignados* Movement.¹ Taking place between the Arab Spring

¹ They took the name of *indignados* ('outraged') after a book by Stephane Hessel that encouraged resistance and a pacifist rebellion against inequality and social injustice (Hessel, 2011). First published in French, the book was translated to English as: Time for Outrage!

and Occupy Wall Street in September, 15-M became both a symbol of civil sovereignty and a platform for social debate.



Figure I-1. 15M Movement in Catalunya square, Barcelona. Left: overview of the square. Source: Eldiario, eldiario.es. Right: assistants raise their arms in agreement during one of the daily general assemblies. Source: el Pais.

The 15-M movement accused the government of mismanaging public resources, systemic corruption, and favouring financial power while alienating the people of decision-making (Figure I-1). The protesters called: “take over the square”, “real democracy now”, and “they do not represent us”. Social inequality, exacerbated by both the economic crisis (Torrente, Caïs and Bolancé, 2015) and the lack of the right to housing (Spanish Dream (€spanish Dr€am), 2009; Colau and Alemany, 2012), played a central role in citizens’ calls for change and also related to global debates on climate emergency and the feminist struggle. Most importantly, the 15-M movement demanded the direct involvement of citizens in governing the city and legitimised social movements. By significantly increasing the political awareness of the population, 15-M became a driving force for social organisation.

The socio-political shift triggered by the 15-M movement reached local government in 2015 in the form of so-called “municipalism” (Figure I-2). In Barcelona, the new political party Barcelona en Comú (BEC, Barcelona in

Common) won the city council elections, led by Ada Colau, a housing activist involved with the Plataforma de Afectados por la Hipoteca (PAH, Platform for those Affected by Mortgages) (Fina, 2015), who became Mayor of the city in a coalition government. BEC was not initiated by professional politicians, but by activists whose aim was the “reappropriation of the public institutions, placing them at the service of people and the common good” in a Barcelona ruled by “democratic rebellion”,² in a clear reference to 15-M. The new municipalism was evidence of burgeoning social movements and a historic moment in the city. It created the opportunity for fostering grassroots and community organisations that can make an impact on local government from within.³



Figure I-2. Ada Colau. Left: In 2007 as an activist for the right to housing, dressed as *Supervivenda* (*Superhousing*) *superhero*. In the poster: “Housing out of the market along with education and

² From their foundational manifesto: <https://barcelonaencomu.cat/ca/manifest-guanyem-barcelona>. Accessed 01.02.2019.

³ “Democratising the city also means recognising and promoting local initiatives and networks of self-managed public goods and services, from cultural and social centres to consumption cooperatives, community gardens, time banks and early childhood facilities for families. Public institutions should give these groups spaces, resources and technical support while respecting their autonomy and not instrumentalising them” from “Why do we want to win back Barcelona? Principles and commitments to guide the way”, Guanyem Barcelona, 2015. Available in English at: <https://guanyembarcelona.cat/es/compromisos>. Accessed 05.01.2019.

healthcare". Source: *El Periódico*, elperiodico.com. Right: 23rd of June 2015, taking the office of Barcelona Mayor.

Along with social movements, some young architects are calling for a politicisation of architecture through an engagement with social agendas and neighbourhood demands. Critiquing previously uncontrolled urban development and property speculation, and role of architects in them, they see the city as a *tabula plena*, both physically and socially. Architects have begun to engage with local communities and grassroots movements, emphasising everyday architecture and ordinary needs while championing the right to the city (Lefebvre, 2017 [1968]), the spatial justice (Soja, 2009),⁴ feminist claims (Col·lectiu Punt 6, 2019; Saldaña et al., 2019) and environmental sustainability. This presents a shift in the attitude of architects: rather than waiting for a public or private commission, they proactively respond to existing needs. With the aim of including the maximum number of voices and stakeholders in urban transformation, the way architecture understands itself as a discipline has changed: architects' expertise and their role are being questioned, as well as their knowledge, existing power asymmetries and leadership in architectural production (Figure I-3).

⁴ To ground this in the case of Barcelona, there is a quantifiable distance between "rich and poor neighbourhoods": 87 m² difference in the dwelling size, on average, and almost 10 years of life expectancy. Highest life expectancy: 87.85 years in la Vila Olímpica. Lowest: 78,08 years, Vallbona neighbourhood. Data from Municipality of Barcelona, available at: www.bcn.cat/estadistica/catala/dades/tvida/salutpublica/t39.htm. Accessed 01.05.2020.



Figure I-3. Left: *Arquitectos de Cabecera, Citizen’s Technical Consultation Office, within the framework of the “Piso Piloto” exhibition, CCCB, Barcelona, 2015. The office operated as a free architectural consultancy service. On the left (white shirt), the second supervisor of this doctoral thesis, Ibon Bilbao. Source: AC Archive. Right: Lacol architects developing a co-design workshop for la Borda cooperative housing (2014-2019). Source: courtesy of Lacol.*

Within this process, “community architects” are embracing a paradigm shift in architectural practices (from traditional studios to collectives, associations and workers’ cooperatives), production processes (architects as enablers using collaborative design methods, and design opportunities that derive), and outcomes (both spatial and non-spatial). By “community” I refer to a self-managed and non-profit group with shared, political objectives that feels legitimised but also responsible for its decisions and its built environment as well as the people it shares these with. By “collaborative architecture” I mean the practice of including different stakeholders, especially civic society as a collective yet heterogeneous subject, in the procurement stages of an architectural project.

ARCHITECTURE’S PUBLIC

In a seminal text ‘Architecture’s Public’, Giancarlo de Carlo (2009 [1969]) discussed the agency of architects in relation to decision-making and governance by critically pointing out the contradictions of architectural practice: a dependency on the agendas of those in power, which has resulted in the perception of architects as an elite profession detached from the society they

serve. A decade later, de Carlo (1980) underlined the dichotomy between “architecture and reality”, meaning its everyday life, evident in the elimination of human representations in architectural media as if they were “contaminating germs” and not, as he considered it, a “reciprocal necessity” existing between designers and users.

The cultural construct of the architect as a heroic, autonomous designer who aims for a total control over their work was first promoted by the Modern Movement in the early twentieth century but is still taught, practised and celebrated today. However, already in the mid-twentieth century this attitude was critiqued, for example by Team X and their well-known Doorn Manifesto of 1953, which underlined the importance of considering local communities as drivers of architectural projects. Likewise, some years later, the protests of May 1968 in Paris reimagined the role of architecture in society, repoliticising its practice and enforcing its social agendas (Franco Santa Cruz, 2018).

Residents’ participation and social values were embraced by architects from the 1960s onwards, who considered necessary the inclusion of residents in the design stages of projects. Indeed, according to de Carlo (2009 [1969], p.16) it is in the architects’ best interests to include users: “The neighbourhoods and buildings planned 'for' the users decay because the users, having not participated in their planning, are unable to appropriate them and therefore have no reason to defend them.”

Notable examples of this approach are de Carlo’s urban projects for Urbino (1958–1964) and Villaggio Matteotti in Terni (1970-71), and projects by Otto Steidle (Genter Strasse, Munich, 1969-75), Ralph Erskine (Byker Wall, Newcastle upon Tyne, 1969-75), Lucien Kroll (Student Housing, University of Louvain, 1970-76) and Frei Otto (ÖkoHaus Berlin, 1983-88). In the Global South, and in addressing informal settlements, Habeel Hamdi (Hamdi, 1995) and

John Turner (Turner and Fichter, 1972; Turner, 1976) adopted a non-deterministic design approach, advocating for residents to take direct control of the building process and its construction. Similarly, anarchist architect Colin Ward (1976) saw in residents' engagement an opportunity for self-management and cooperation, understanding housing procurement as a political project in itself. At a planning scale, Christopher Alexander developed masterplans through a series of smaller operations, which he termed “piecemeal growth”, at the University of Oregon, United States (Alexander, 1975); and Jane Jacobs (1961) advocated urban design based on walkable and diverse neighbourhoods that encouraged social interaction and mutual care.

Interest in, and the practice of, community architecture peaked from the 1960s to the 1980s. Three seminal publications theorise this period. Richard Hatch's fundamental work *The Scope of Social Architecture* (1984) offers a comprehensive collection of experiences in citizen engagement in architectural designs at different scales in different geographical contexts. Hatch's book presents “social architecture” both at a theoretical level and in practice, giving examples of projects by architects with a special focus on social and political contexts.

Secondly, Nick Wates and Charles Knevitt's seminal work *Community Architecture* (1987) offers a genealogy of the community architecture movement from the 1960s to the 1980s, discussing its emergence and implementation in the UK. Wates and Knevitt (1987, p.13) argue that “the environment works better if the people who live, work and play in it are actively involved in its creation and management instead of being treated as passive consumers”. To them, this entails a better management of resources in addressing local needs and an improvement in how space is perceived and used, as this has an impact on the pride people take in their surroundings. At a social level, benefits include

the strengthening of communities and personal fulfilment. Wates and Knevitt (1987, p.113): also propose “The Laws of Community Architecture”, which are “not, of course, a new discovery – rather a rediscovery of essential truths”:

1. People willingly take responsibility for their environment and participate both individually and collectively in its creation and management;
2. A creative working partnership is established with specialists from one or more disciplines;
3. All aspects of people’s environmental needs are considered simultaneously and on a continuing evolutionary basis.

In doing so, community architecture entails shifting the role of the architect from provider of services to enabler, from detached expert to a working partnership with users, from architecture as a product to architecture as a process. Crucially for Wates and Knevitt, this shift does not compromise or jettison designers’ professional expertise and “the traditional virtues of commodity, firmness and delight” nor the design capacity of the architect.

Thirdly, the work of Argentinian architect Rodolfo Livingston presents a practice-based method for the “family architect” and “community architects” (Livingston, 1992; 2002), who is in the direct service of citizens. Working mostly in post-revolutionary Cuba and Argentina from the 1970s, Livingston practised an architecture that extensively dealt with residents' daily housing problems, turning their needs and preferences into his project priorities with its success measured by the improvement in living conditions it achieved.

Partly explained by the social inequality resulting from global capitalism, and the detachment of architects from urban and social contexts, community-led initiatives and participative methods have been increasingly studied in the 1990s and 2000s (Hill, 1998; Hughes and Sadler, 1999; Blundell Jones, Petrescu and Till, 2004; Rosa and Weiland, 2013). Most commonly, these approaches

build on Sherry Arnstein's (1969) key classification of “participation” in a ladder or scale, with citizen control at the one and institutional manipulation at the other end. To Arnstein, an effective participation crucially relies on the redistribution of power and on questioning the status quo. Arnstein’s ladder has been discussed and expanded by many authors since, as summarised by Vicente Javier Díaz García (2015) (Figure I-4).

ARNSTEIN (1969)	HART (1993)	PRETTY (1995)	TRILLA and NOVELLA (2001)	REBOLLO (2002)	PATEMAN (1970)	SUSSKIND and ELLIOT (1983)	GYFORD (1991)	FOLGUEIRAS (2005)
Citizen Control	Initiated by kids and consensual	Autonomous mobilization	Meta-participation	Decide	Full participation	Co-productive	The right to be part of	BE PART (DO) Behavioral Action
Delegated power	Initiated and directed by kids	Interactive						
Partnership	Initiated and directed by adults and consensual	Functional	Projective participation	Debate	Partial participation	Conflictive	The right to be consulted	TAKE PART (FEEL) Affective Motivation
Placation	Consulted and informed	In material benefits	Consultative participation	Consult				
Consultation	Assigned but informed	To consult			Pseudo-participation	Paternalistic	The right to be informed	GIVE REPORT (KNOW) Cognitive Information
Informing	Symbolic participation	To give information	Simple participation	Inform				
Therapy	Decoration	Passive	NO PARTICIPATION					
Manipulation	Manipulation							

Figure I-4. Comparison of the different proposals to define degrees of participation. The first column shows Arnstein’s classification. (Díaz García, 2015), originally in Spanish, translated by author.

Nishat Awan, Tatjana Schneider and Jeremy Till (2011) developed an atlas of “other ways of doing architecture” – defined as “Spatial Agency” – which underlines the transformative capacity of architecture to “initiate empowering

social relationships [rather] than [looking] at formal sophistication, the latter of which has been for so long the paradigm of architectural excellence”. The authors emphasise the distinctive characteristics of these practices; on the one hand their motivation (politics, professionalism, pedagogy, humanitarian crises, ecology, and an overarching ethical motivation), while on the other the operations developed (expanding briefs, initiating, shared economy, appropriating, indeterminacy, making visible, networking, sharing knowledge, subverting and opposing). Although Awan, Schneider and Till present these practices as a new paradigm as how to operate rather than as a marginal alternative to mainstream architecture, these approaches are in a clear minority (but a growing one) within the wider context of architectural production.

WHY BARCELONA

The contemporary European context evidences that the emergence of collectives and collaborative architectural practices is a broad phenomenon.⁵ As Jeremy Till (2012) brilliantly noted, within the new conditions of austerity a young generation of architects’ collectives managed to “do things differently” instead of “do[ing] the same thing with less”, thus turning challenges into design opportunities through distinctive disciplinary approach to spatial problems.

In this context, Barcelona as a case study exemplifies the growth and consolidation of collaborative architecture, for three reasons. First, projects undertaken there show the capacity of the discipline to address situations in which conventional forms of public and private procurement are failing. These

⁵ This is not a solely European phenomenon. However, since this PhD is based in Barcelona and framed by Spanish and European geographic contexts, a Eurocentric perspective is inescapable. To name few examples in the European context in a list that falls short: Assemble and MUF in the UK, Atelier d’Architecture Autogérée and Collectifetc in France, Baupiloten and Raumlabor in Germany, Rotor in Belgium, and Working for the 99% in Portugal.

include the response to social demands within a limited budget or in community-led projects independent of institutional leadership.

Second, as evidenced by the 1992 Olympics and the 2004 Culture Forum, but also as a common pattern in architecture, a certain kind of architecture has benefited from work opportunities derived from specific public policies. While 15-M had an impact at a national scale, the arrival of municipalism in Barcelona produced unique institutional support for community-led projects. This had an indirect impact on opportunities for architects and allowed them to consolidate design methods and scale up the size and number of projects that they worked on. Municipal support included making publicly owned land for community initiatives, including self-managed facilities, cooperative housing and local socio-economic initiatives at a neighbourhood scale. This did not start with Colau's government: initiatives like Can Batlló (2011) and la Borda (2014) emerged from agreements with the previous government of Xavier Trias (Convergència i Unió, Catalan right-wing political party). Likewise, here are many other examples of collaborative architecture with institutional support in the metropolitan area of Barcelona that were undertaken under municipal governments of different political colours, evidencing a growing political interest in collaborative practices.

The third factor relates to how collaborative practices are perceived by other architects and the previous two points: collaborative architecture is able to produce outcomes comparable to conventional forms of procurement, be they masterplans, public space, facilities or housing. Indeed, they are not only capable of developing complex projects but also include more stakeholders in the process, enabling a more complete response to complex urban problems.

RESEARCH OUTLINE

The aim of this doctoral thesis is to explore the impact of collaborative practices within and beyond the discipline of architecture. In analysing collaboration as a mode of production framed by protocols of civic engagement this thesis explores how collaborative practices are redefining disciplinary boundaries in a strategic re-thinking of the relationship between the architectural project, social modes of government and city council policies. This is done through the analysis of changing architectural practice and has the following objectives:

- O₁. To study the work of architects as a process rather than as a formal outcome by revealing new and changing disciplinary tools and design methods.
- O₂. To explore the distinctive design outcomes, both built and non-spatial, that result from the inclusion of local stakeholders and future users at specific points in the architectural project.
- O₃. To enquire into the contribution of architects to local demands, not just in delivering a building, but in terms of their understanding of their rights and responsibilities and also to policy-making
- O₄. To analyse how the challenges and opportunities arising from collaborative practices differ from conventional forms of procurement.

This thesis follows six main lines of enquiry to study shifts around architectural practices, which are gathered in three key research themes (Figure I-5): changes in the architectural offices (1. Daily Practice & Organisation, and 2. Aims & Goals); changes in the process of production of architecture (3. Professional Roles and 4. Design Tools & Methods), and distinctive outcomes (5.

Constructed Outcomes and 6. Non-spatial Outcomes). Each of these lines of enquiry relate to specific research questions (RQs 1-6) and research methods, and bring the aims and objectives of the thesis together:

RQ1: How has office organisation and management changed?

RQ2: Given the wider social politicisation, what are the office's aims beyond design?

RQ3: Which are the new roles beyond design and build? How do architects relate to other stakeholders?

RQ4: Which new tools and methods are being employed and how are traditional ones being adapted?

RQ5: What design and research opportunities emerge at material, typological and construction levels?

RQ6: How are collaborative practices affecting policy changes, urban governance, and citizens' perception of their rights?

In addition, a transversal seventh line of enquiry and RQ examines what specific knowledge is generated through collaborative design processes, and how can this be transmitted into further projects in different contexts?

COLLABORATIVE ARCHITECTURE BARCELONA - RESEARCH MIND MAP

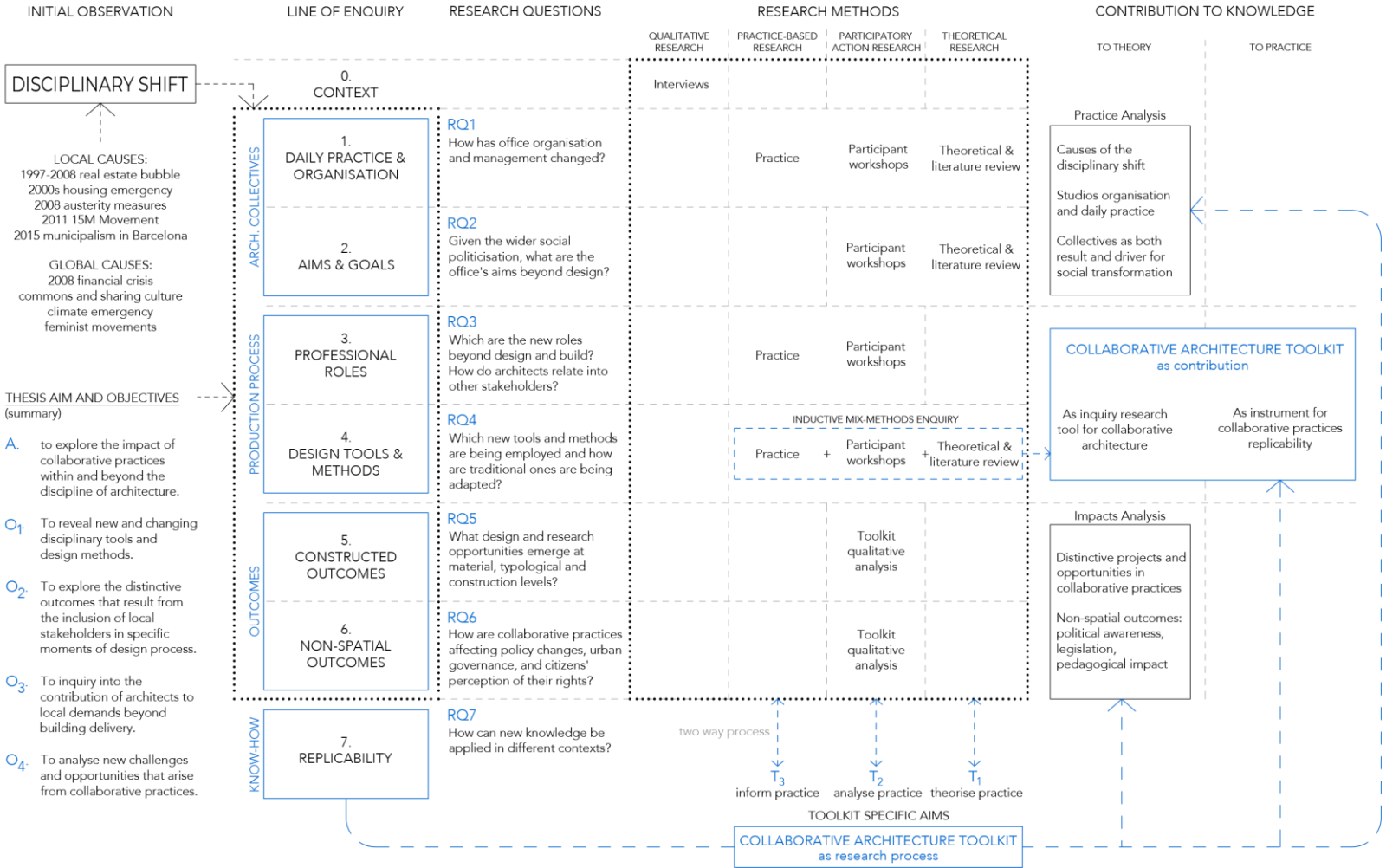


Figure I-5. Research mind map. After the initial observation and a summary of thesis aim and objective (left column), 7 lines of inquiry (1-7) are followed by research questions (RQ1-7, research methods, and contribution to knowledge. In rows, themes and lines of inquiry unpack the disciplinary shift towards collaborative practices. The Collaborative Architecture Toolkit is present twice in the diagram: as a research process (below, including specific aims in relation to research) and as key contribution (right column).

In this regard, a key concern of this research is how to produce effective and communicable knowledge for further practice. Christopher Frayling (1993)⁶ distinguishes between “research into art and design”, which involves a theoretical approach to design problems; “research through art and design”, when the enquiry requires the development of an identifiable designed output based on reportable experimentation, and aims for further application; and “research for art and design” when research is undertaken through the production of an artefact (or piece of design), where knowledge is not communicated verbally but embodied in the object.

Research “into” design – that is, a theoretical approach – seemed insufficient to offer a deeper understanding of the opportunities, problems and contradictions of the daily practice of collaborative architecture. Specificities such as stakeholders’ political agendas, budget constraints, outdated regulations, stakeholder moods, delays of any sort, or many other fundamental parameters are often overlooked. Likewise, qualitative research – for example through interviews – can only gain observed knowledge, as distinct from that which I would acquire by directly addressing design problems. “There are circumstances where the best or only way to shed light on a proposition, a principle, a material, a process or a function is to attempt to construct something, or to enact something, calculated to explore, embody or test it” (Archer, 1995, p.12).

⁶ Frayling exemplified “research through art and design” by the RCA degrees by project, back in 1993.

Accordingly, my thesis is by practice, with research by design practice over the last 500 years developing distinctive forms of knowledge production in architecture (Fraser, 2013; Hill, 2013).

Frayling’s second approach, research “through” design, offers the most appropriate framework for this thesis and its aims and research questions. It includes Action Research, “where the action is calculated to generate and validate new knowledge of understanding” (Frayling, 1993, p.4). Although the practice of architecture can transform traditional research methods – from questions to answers – into a generative mode in which reflection comes after the outcome (Rendell, 2013), not every form of practice qualifies as research (Till, 2007). Like other forms of research, Action Research must be “knowledge directed, systematically conducted, unambiguously expressed”, with transparent data methods and producing transmissible knowledge (Archer, 1995). This requirement presented a major methodological challenge: although my research interests derive from my experience as a practising architect working on community-led projects, this had so far failed to be systematic. I therefore developed a Collaborative Architecture Toolkit (Figure I-6).



Figure I-6. Toolkit in its 6th version, printed. Left: cover. Right: typical page analysing a collaborative design tool or strategy.

The Toolkit structures a key research process of this thesis. It dissects collaborative architectural production into collaborative tools and methods linked to specific design stages. This enables an understanding of architectural production from its process and structures a discussion of the specifics of how the inclusion of users and local stakeholders in one or more design stages interrogates disciplinary autonomy and the suitability of conventional design methods (Figure I-7). Second, by ordering design methods into a taxonomy, it becomes a systematic analysis method and by analysing the usefulness of specific tools and methods creates knowledge directed towards further application, that is, responds to process replicability as the seventh line of enquiry. Finally, at a theoretical level, the Toolkit has become instrumental to structure discussions in the thesis on topics such as the democratisation of public space, power relations, and knowledge asymmetries in architecture.

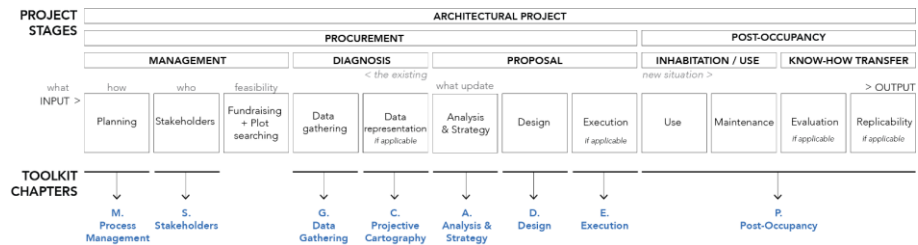


Figure I-7. Breakdown of project stages (top row) linked to the Toolkit structure (bottom row), aiming for a clear and systematic structure.

The Collaborative Architecture Toolkit aims to expand the design tools available for architects. It is instrumentalised in relation to practice in three different situations, referring to three specific aims, around which the entire PhD is structured (Figure I-5, bottom):

- T₁. The Toolkit as a way of enabling reflection on practice from a theoretical perspective (Chapter III)
- T₂. The Toolkit as an instrument to methodologically analyse practice, through case studies (Chapter V)
- T₃. The Toolkit to inform how I – and potentially others – practise our discipline differently (Chapter VI).

Taking Jeremy Till's (2007) classification of fields in which architectural research operates – processes, products and performance – this research and Toolkit fall into the category of architectural (collaborative) processes but also offer a better understanding of both products and performance.

The Toolkit is developed through a mix of practice-based research and Participatory Action Research (PAR), which are complemented by theoretical, archival and qualitative research (see the Mind Map in Figure I-5).

Practice-based research is developed through projects in Arquitectos de Cabecera⁷ (AC), a collective that emerged in 2013 at Escola Tècnica Superior d'Arquitectura de Barcelona (ETSAB, Barcelona School of Architecture) and that understands architectural pedagogy as tool for social transformation through community-led projects and of which I am a founding member.⁸ As an AC member, during the last four years I have been involved in community-led projects of different sizes and scope (Figure I-8).⁹ Secondly, through the

⁷ Arquitectos de Cabecera means 'GP Architects' or 'Family Architects', in its most literal but inaccurate translation.

⁸ Ibon Bilbao, second supervisor of this thesis, is also a founding member of AC.

⁹ The main ones have been the co-refurbishment of la Escocesa Warehouse L, an abandoned warehouse that reopened and was tactically refurbished to host an artist creation factory; Safaretjos, the transformation of an infrastructural wasteland for the revival of a traditional festival with local associations; and ongoing projects such as Teatracció in Nou Barris, the facilitation of a ground floor space for a social impact theatre and community centre with a

collaboration with Llindarquitectura (Ibon Bilbao and Caterina Figuerola), which allowed me to co-author several design proposals for public housing competitions, incorporating typological research in public housing (Figure I-9), the most significant of these proposal for this thesis is the La Quinta Força (LQF) cooperative housing project, winning proposal for the competition organised for the use of ceded public land by the municipality of Barcelona in 2019–2020 (bottom right in Figure I-9, Figure I-10). LQF incorporated earlier typological research with a social component derived from the cooperative as a form of collective living, co-operative management, and shared ownership.



Figure I-8. An example of the author's involvement in community-led projects with AC. Images of the author at different moments of the Warehouse L reopening and refurbishment process, left to right and

minimum budget; la Mariola in Lleida, a neighbourhood-scale intervention on a socially complex 1950s housing polygon suffering urban decline; and the Oficina de Suport Tècnic a la Rehabilitació (OSTRAC, Technical Support Office for Housing Refurbishment), a publicly-funded citizens' consultation office in Poblenou neighbourhood, Barcelona. See Annexe 2.

top-down: demolition works, testing the space with an air construction, construction workshops, and meetings with the association of artists of la Escocesa.



Figure I-9. “Housing systems”. Plans of the housing units presented in public housing competitions in co-authorship with Llardarquitectura during 2018-2020. Housing layouts are organised in seven groups according to typological characteristics.

As a result of the hands-on direct practical experience in both AC and with Llardarquitectura, I have been able to enhance the Toolkit (and the associated theoretical discussions) with indispensable practice-based knowledge. This includes an awareness of how different stakeholders operate in collaborative architecture, an understanding of their perspective, protocols of negotiation, and goals, and how they pursue them over time when facing different challenges and opportunities, and problems that have been encountered, as well as strategies to overcome them as the projects evolve. Also,

I acquired a knowledge of how design tools employed by architecture collectives differ from traditional ones.

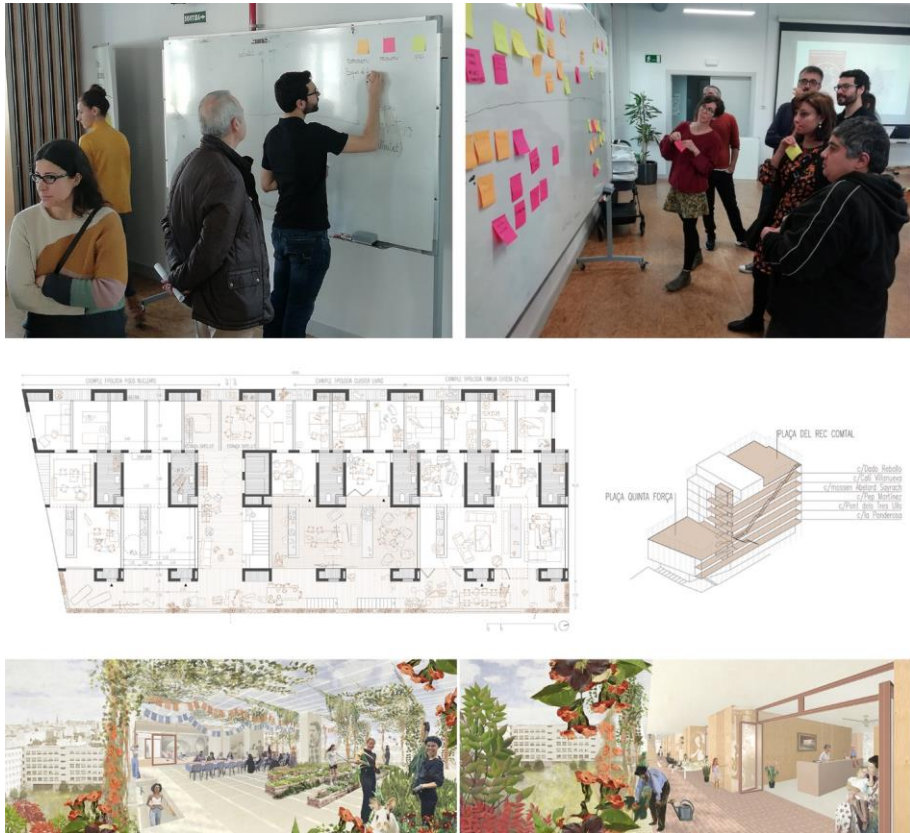


Figure I-10. *La Quinta Força* cooperative housing, co-authored with Llinarquitectura. Top: the author organising (left) and facilitating one of the activities with Ibon Bilbao (right). Middle: plan and axonometry of the building. Below: views of the rooftop and elevated street. Source: author.

In contrast to AC projects, which usually emerge from contextual opportunities, LQF arose intentionally to test strategies and design hypotheses that emerged from the analytical part of this thesis. On the other hand, by incorporating users during the competition phase, LQF project required a shift

and research in the design process and disciplinary tools of other competitions and demanded a research on collaborative design methods, which in turn fed the Toolkit with specific, practice-based knowledge. The fact that in LQF the community preceded the building allowed the establishment of agreements and negotiations during the design phase, for which co-design workshops were designed and conducted.¹⁰

Once the Toolkit was drafted, the need to test it was grounded in the use of PAR, which allowed the Toolkit to be analysed as a tool for research and as a projective instrument to test the replicability of collaborative practice. This process improved successive versions of the Toolkit, while in parallel some theoretical arguments were informed by workshop conversations. Between September 2021 and March 2022 I conducted a total of 19 workshops with collectives in Barcelona. This analysed 23 built works by Lacol, Arqbag, Equal Saree, Celobert, Straddle3 and MUT (presented in Annexe 3), classified according to project type: housing, facility, and public space (Figure I-11). In addition, the Toolkit was also tested as a projective and pedagogical tool in an AC studio at ETSAB. As a result of PAR, collaboration as a means of production in architecture practices became both the topic of the thesis research and its mode of production.

¹⁰ Some of the research developed around cooperative housing in Barcelona, including an analysis of projects developed in Barcelona and strategies to overcome limiting regulations – designed for conventional nuclear family and single ownership flats – were published in a paper co-authored with my two supervisors (Avilla-Royo et al., 2021).

WORKS

<p>HOUSING</p> <p>NEW HOUSING MODELS</p> <p>W01 ATRI + APROP Tactical Accomodations</p> <p>W02 La Borda Cooperative Housing</p> <p>W03 Cirerers Cooperative Housing</p> <p>W04 Guimerà Senior Cohousing</p> <p>REFURBISHMENT</p> <p>W05 Pas a Pas les Planes</p> <p>W06 Community Energy Refurbishment (REC)</p> <p>W07 Lancaster, 'Guernika'</p>	<p>FACILITY</p> <p>RECOVERY INDUSTRIAL HERITAGE</p> <p>W08 Can Batlló Complex</p> <p>W09 Warehouse 11</p> <p>W10 Coopolis Phase 0</p> <p>W11 Arcadia School</p> <p>W12 Can 60</p> <p>W13 La Escocesa Warehouse L</p> <p>EXTENSION/TRANSFORMATION EXISTING</p> <p>W14 (e)co Platform</p> <p>W15 Pere Grau Space</p> <p>W16 Coeducative Playgrounds</p> <p>TEMPORAL APPROPRIATION</p> <p>W17 Bocachica</p>	<p>PUBLIC SPACE</p> <p>SKATEPARKS</p> <p>W18 SK8+U Arbúcies</p> <p>W19 La Santa Urban Sports Park</p> <p>W20 Moviment Obrer Square</p> <p>SQUARE AND STREETS</p> <p>W21 Baró Square</p> <p>W22 Ringo Rango Route</p> <p>TEMPORAL APPROPRIATION</p> <p>W23 Safareijes</p>
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Figure I-11. 23 analysed case studies organised by project type. The alphanumeric codes are used to refer to the projects throughout this thesis. Detailed information can be found in Annexe 3.

Practice-based research is complemented with qualitative methods to provide a social and political theory context to the disciplinary shifts in architecture. Discussions include the sharing economy, the commons and cooperativism, and the right to the city. Qualitative research is used to understand the different points of view of the stakeholders involved in the studied processes, and the role that architects played in them. I undertook 31 semi-structured interviews with decision-makers and planners from the city council and public agencies, neighbourhood association presidents, independent designers, sociologists, and activists involved in four processes of urban transformation.¹¹ In addition, I specifically interviewed stakeholders involved in shifts in housing policy and architectural pedagogy. More information can be found in Annexe 1.

¹¹ A contested regeneration of a public square (Pou de la Figuera); the transformation of an industrial complex into self-managed initiatives (Can Batlló complex), the preservation of a historic building as a public community centre (Can 60), and a social project in the form of a gym (Sant Pau Social Gym).

In addition, a literature review and archival research is used to compare contemporary practices to historical ones starting from the 1950s onwards.

The main contributions of this PhD can be grouped into three areas (Figure I-5, right column). First, in relation to the analysis of the practice of collaborative architecture: the causes of the disciplinary shift, the organisation and daily practice of architectural collectives, and their disciplinary, social and political aims. Second, through an analysis of the new professional roles and design tools and methods employed. In this regard the Toolkit aims a contribution both to the theory (in enabling an analysis of collaborative practices through their process, design methods and tools: a gap in the knowledge that was found at an early stage of this research) and practice (making those tools available to practitioners).

Third, concerning the outcomes of those practices, both built (evidencing an unprecedented degree of experimentation derived from users' commitment) and and non-spatial (such as triggering regulatory changes or producing a pedagogical impact on stakeholders involved in those practices).

THESIS STRUCTURE

After the introduction, Chapter II '**The Disciplinary Shift**' presents a contextual discussion of Barcelona and the theoretical framework of the thesis through unfolding the changing daily practice of architects' collectives and new pedagogical practices (**RQ1**) and office's political and social aims as part of the commons and sharing culture (**RQ2**). Secondly, by discussing how architects and social movements collaborated in Barcelona, especially after the 1970s, the disciplinary shift is contextualised as a re-emergence of existing disciplinary attitudes.

Chapter III **‘The Architect as Mediator’** analyses the practice of architecture as a political condition. The relational nature of the discipline and dependency on other stakeholders is discussed concerning power relations, process leadership, knowledge asymmetries between different stakeholders, and professional responsibilities (**RQ3**).

Chapter IV **‘The Toolkit as Research Process’** unfolds the making of the Toolkit, including aims, originality, PAR methods, and its evolution. This discusses the project process regarding the inclusion of users in different design stages and its impact on design decision-making (**RQ4**).

Chapter V **‘The Toolkit as Analytical Instrument’** employs of the Toolkit to analyse 23 built works in Barcelona through PAR (**RQ5**). Building on this analysis, project opportunities emerging from collaborative architectural practice are discussed, as well as the new professional roles of architects in relation to other stakeholders and project procurement (**RQ3**) and non-spatial design outcomes (**RQ6**). See Annexe 3 for the analysis sheets.

Chapter VI **‘Toolkit as Projective Tool’** explores the potentialities of the Toolkit for addressing issues of scalability and replicability in practice (**RQ7**). This discusses how the testing of the Toolkit through a design studio at ETSAB informed the practice of others. This chapter also examines the pedagogical impact of collaborative architecture on stakeholders and society at large as a non-spatial outcome (**RQ6**).

Finally, Chapter VII **‘Redefining Disciplinary Boundaries’** presents the thesis conclusions.

II.

THE DISCIPLINARY SHIFT

“This book doesn’t talk about architecture.

If you don’t ask yourself what architecture is, then it doesn’t interest you”.

— Recetas Urbanas, *Trucks, Containers, Collectives*, 2010

BARCELONA, WHO DO YOU GET PRETTY FOR?

The recent urban history of architecture in Barcelona has been greatly shaped by the so-called “Barcelona Model”, which transformed the city during the 1980s and 1990s. Although the interventions had already started in the early 1980s (Bohigas, 1983), the designation of Barcelona as an Olympic city in 1986 propelled and scaled up urban transformation in anticipation of the 1992 Games. The transformations have been widely described, analysed and debated (Bohigas, 1983; Moix, 1994; Borja, 2004; 2010; Montaner, Álvarez Prozovrovich and Muxí, 2012; Delgado, 2017).

Writers and academics largely agree that designers and architects played a crucial role in these transformations, due to the role attributed to design as a transmitter of the city's social, political and civic character and the power that architects held over urban development. "There was a time when la Falange [dictator Francisco Franco's political party] ruled, another when Opus [Dei] was in charge and, in Barcelona, there was a time when architects ruled", stated the journalist Llatzer Moix, who nicknamed Barcelona "the City of Architects" (Moix, 1994).¹² After many years of abandonment, the city aspired not only to an improvement in its services and infrastructure but also an overall "embellishment", through campaigns such as Barcelona Posa't Guapa (Barcelona Get Pretty).

Manuel Bailo Esteve (2015) emphasised the importance that the design of public space played, understood as a primary public facility, in the renovation of nearby buildings. This had an effect on the significance and meaning of public space after the dictatorship (1939–75), "creat[ing] an optimistic and encouraging environment in the daily mood of many citizens of Barcelona" (Bailo Esteve, 2015, p.153). For Peter Rowe, Barcelona exemplified how the best urban and architectural opportunities arise when civil society and the state collaborate with a common purpose, producing not only a qualitative improvement in the city but "an intellectual idea" of it (Rowe, 1997, p.49). The Olympics transformation caught the attention of the general public and the architectural press, and made Barcelona, a post-industrial city emerging from dictatorship, an attractive city

¹² This crucial political-architectural cooperation is best exemplified in the figures of mayor Pascual Maragall (during 1982–1997) and the architect Oriol Bohigas, who had an enormous influence on today's city understanding of architecture. Bohigas' determining influence took place in different scenarios: Director of ETSAB Barcelona School of Architecture (1977-80), including the definition of the Plan of Studies (1979); Delegate for the Urban Planning area in the Municipality of Barcelona (1980-84); external councillor of the same as a practitioner in MBM architects (1984–1991) and Culture Councillor of the Municipality (1991–1994).

that became exemplary for the democratic qualities that other cities should aspire to.

Despite a general agreement that the urban transformations triggered by the Olympic Games had a very positive impact on the city, it was not exempt from contradictions. Over the years, it was as much criticised as celebrated for the intensifying commodification and commercialisation of the city over the following years (Borja, 2010; Capel Sáez, 2011; Scarnato, 2016), which best evidence were the transformations for the the 2004 Culture Forum, an event that wanted to emulate the impact of the Olympics. Barcelona increasingly became during the 1990s a “city-market”, in which the power of financial capital was increasingly accepted, as Ricard Fayos, Director of Planning Services of Barcelona City Council since 1992, acknowledged (*Com un Gegant Invisible. Can Batlló i les Ciutats Imaginàries*, 2012). The city council was accused of the systematic privatisation of public space and public assets (Moreno and Vázquez Montalbán, 1991) in its support of large-scale property speculation (UTE Unió Temporal d’Escribes, 2004). At the same time, a lack of public debate on this urban transformation (Montaner, 2003; 2004) resulted in a rift between social movements and local government (Delgado, 2017). Thus, politicians were accused of collaborating with investors due to weakness, ignorance or personal gain and professionals (including architects) were described as having “prostituted themselves” (Borja, 2010). Especially architecture played a major role in turning the city into a “theme park” and a brand at the service of capitalism, “a consumable with a human society inside it” (Delgado, 2017). Indeed, “Barcelona” was officially registered with the Patent and Brand Register in 2010.

While the regeneration projects for the Olympics were mostly designed by local architects, towards the 2000s there were an increasing number of buildings

by so-called international “star architects”. Highly individual buildings, irrelevant to their context, facilitated international property investment at the cost of fragmenting urban reality (Montaner, Álvarez Prozoovrovich, 2012), as evident in the regeneration of the Poblenou neighbourhood through the 22@ masterplan and the nearby Culture Forum development, which was approved in 2000. Urban transformation avoided to respond to uncomfortable questions from social movements (Col·lectiu REpensar Barcelona, Grup de Participació, 2008).

Spain’s economic prosperity and thriving property market during the 1990s and 2000s dramatically shifted the social perception of architects, who were increasingly seen as egomaniac professionals disconnected from reality and social needs who pursued arbitrary iconic projects at great public cost (Moix, 2010; 2016). Architects were seen as key participants in the destruction of local urban identity and memory, and in some cases political corruption and illegal developments in protected natural areas.

It was then that the 2008 economic crisis hit.

The global crisis and subsequent national austerity measures in Spain coincided with already existing discontent about urban transformation and decisions by local government. The same architectural strategies that proved very efficient in transforming Barcelona during the 1980s and 1990s (the transformation of public space, new neighbourhood facilities, metropolitan scale mobility infrastructure, and the “beautification” of the city) were two decades later seen as failing to address the most urgent urban problems (a housing emergency, gentrification, commodification of the city and urban inequality). Austerity measures stopped public investment into city transformation, architecture and associated agendas. In addition, a lack of a critical political and social agenda in architecture – that is, an exclusive focus on the formal aspects of architecture – had created a vacuum of disciplinary awareness and means to

directly engage with those living in the city and include them as proactive stakeholders.

While the architects of the Barcelona Model enjoyed the many opportunities brought about by public investment along with the optimism of a young democracy, a welfare state in a growing economy, and social trust in new democratic institutions, two decades later the outlook had drastically changed. Democratic values were questioned while trust in institutions diminished, with austerity measures and a lack of professional opportunities due to the economic crisis increasing social injustice and urban inequality. This situation gradually led to a reevaluation of architectural practice by a group of architects' collectives who shared a commitment for their practice to support social transformation (Figure II-1).

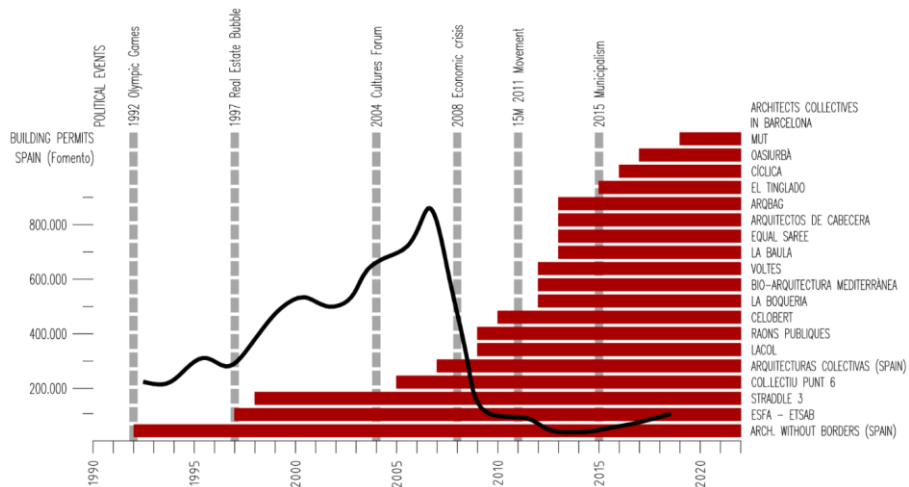


Figure II-1. The emergence of architects' collectives in Barcelona in relation to building permits in Spain (left) and significant events (top). The collapse of an architecture based on the real estate bubble coincides with the gradual emergence of architects' collectives, evidencing a shift in professional profiles. Noticeably, the emergence of architects' collectives takes place before 15M, 2011, and 2015 municipalism.

While the disciplinary tradition frames architects as engineer-based knowledge experts in charge of, but also limited to, design and build procurement stages, new approaches include social sciences knowledge and addressing stages from diagnostic to the post-occupancy phases and in some cases include management as well. Far from denying the value of the knowledge inherited from older generations, these emerging approaches to practice are shifting the limits and expanding the scope of architecture, thereby creating new roles for architects. The inclusion of local communities at different procurement stages in projects of all types and scales entails the questioning of power relations in decision-making, professional expertise, and the assumed legitimacy of public institutions to control urban development. Importantly, although community architects' projects are mostly dedicated to community-led design, their approach does not imply a direct refusal to work with public or private clients but is rather a shift in goals and desired impact, aiming to include collaborative practices and environmental and social agendas in the procurement process.

The work of Henri Lefebvre is particularly relevant to understanding the political dimension of architects' collectives. First for his explicit acknowledgement that “the right to the city” is not merely the right of citizens to access urban resources, but also the “right to the urban life: right of freedom, of individualisation in a society, of habitat and inhabitation, and finally to the participatory activity and the right of appropriation” in the collective exercise of citizen power (Lefebvre, 2017 [1968], p.158). Collectives do this in two ways: as architects who consider the right to the city in the design process and support the claims of citizens – for example right to adequate housing or in questioning official planning seeking for spatial justice –, and as part of grassroots movements and their own claim to the city in contested urban transformations.

Secondly, in the words of Lefebvre (2013 [1974]), community architects are addressing both the “city” – the physical environment – as much as the “urban” – the social intangible form. To address this, architects are employing new strategies and design methods, increasingly becoming mediators between urban, social and political realities. To Lefebvre, spatial design is never neutral but a human-made, culturally dependent product, and as such it is produced strategically and through power relations. Lefebvre argues that the production of space (which includes the active role of architects) is part of the mechanisms of domination used by powerful forces, the alternative to which is the collective production of space and its self-management, despite the contradictions that the process may entail.

Grounding Lefebvre's approach in contemporary Barcelona, anthropologist Manuel Delgado emphasises the power of urbanism and the ideological value of public space:

[For official urbanism] public space becomes conceived as the realisation of an ideological value, a place for the materialisation of various abstract categories such as democracy, citizenship, coexistence, civility, consensus and other contemporary political superstitions, a proscenium onto which one would want to see gliding an orderly mass of free and equal beings, handsome, clean and happy, immaculate beings who use that space to go and get to work or to consume and, in their free time, walk carefree in a courteous paradise as if they were figures in a colossal advertising hoarding. Of course, in this territory, any undesirable presence is quickly exorcised, and it is seen as appropriate to expel or punish anyone who is not capable of showing middle-class manners. [...] Barcelona is an example of how, if you are not careful, that dream of an unconflicted urban space through which a pullulating army of avid volunteers eager to collaborate collapses as soon as the

external signs of a society whose raw materials are inequality and failure appear. (Delgado, 2017, p.275).¹³

In viewing space as both an outcome of, and conditioned by, social relations, the key question is then whose interests space serves. As Lefebvre (2013 [1974]) states: “(social) space is a (social) product”, an instrument for both thought and action. Lefebvre’s approach to the production of space turns architecture into a political and social discipline, a condition that neither architects nor planners can escape.

Although community architects take on a fundamental role in city transformations, they recognise the limits of architecture as a discipline and challenge the idea that architecture is an independent body of knowledge capable of solving city problems on its own – an argument brilliantly unfolded in Jeremy Till’s *Architecture Depends* (2013). Instead, community architects are embracing architecture’s contingency on social needs, time, politics, funding, and other external factors. Design opportunities are seen to derive from residents’ creativity and commitment in further use and management of space, most obviously in the design of shared spaces, non-conventional typological solutions, material experimentation and environmental systems in cooperative housing (Avilla-Royo et al., 2021).

The inclusion of residents and users in the design process has led to a need for tools to include a social sciences perspective, which has been traditionally lacking in Spanish architecture and training at polytechnics.¹⁴ Architecture collectives do not see “participatory design” limited to diagnostic phases and

¹³ Translated from Spanish by the author.

¹⁴ Public Spanish schools of architecture belong to polytechnic universities. For a detailed history of architecture schools in Spain, see ANECA, 2005 (ANECA. National Agency for the Quality Assessment and Accreditation of Spain, 2005, pp.327–399).

consider social engagement as a structural and fundamental condition underlying their work. This applies to both professional practices (for example, Lacol as a practice is organised around the areas of design, participation and housing policies; Arqbag is concerned with design, participation and energy, and Celobert is organised around design, architecture, housing policies and engineering) and teaching pedagogy (at the Escola Politècnica d'Arquitectura de Barcelona (ETSAB) and the Escola Politècnica d'Arquitectura del Vallès (ETSAV), part of the Universidad Politècnica de Catalunya (UPC)).

DISCIPLINARY SHIFT IN PROFESSIONAL PRACTICE

New disciplinary approaches are changing social and managerial structures and significantly inform how architects work. Community architects are heterogeneous practices that operate in a similar way in terms of social and political aims, their involvement with local communities, their reimagining of disciplinary tools, design methods and expertise, and their challenging of power relations and standards in local government decision-making. However, many aspects of practices differs, such as their legal structure, entry points into design problems and the project focus, ranging from building and construction, policy-making, planning and research to user technical support.

Collectives are set up as non-hierarchical collaborative structures with a variable number of members (commonly between five and fifteen) with assembly horizontal management structures and design authorship. Commonly these practices started as informal collectives (e.g. el Tinglado, MUT), gradually becoming associations (e.g. Oasiurbà, Bioarquitectura Mediterrànea or Arquitectos de Cabecera), and some finally turning into workers' cooperatives (e.g. Lacol, Voltes, Celobert, Arqbag, Col·lectiu Punt 6).

The cooperative approach taken by these new practices is related to recent growth of associationism, which preceded, but was fostered by 15-M in 2011. These self-organised movements made visible social injustices resulting from free market inequalities. Examples of this are organisations that have addressed the housing emergency, such as V de Vivienda ('H is for Housing', since 2006), the Plataforma d'Afectats per la Hipoteca (PAH, Platform for Those Affected by Mortgages, from 2009), and the later "Tenants' Union" of Barcelona (2017). The emergence of housing cooperatives respond to the same crisis. In addition, self-organisation is growing in different economic sectors as an alternative to capitalism, following the Xarxa Economia Social i Solidària (XES, Social and Solidarity Economy)¹⁵ model of management "based on cooperation, equity and self-management" (Fernández and Miró, 2016), rooted on the a historical tradition of self-management and workers' cooperatives at a neighbourhood scale in Barcelona (Miró, 2018). Indeed, architects' collectives and cooperatives are often affiliated to XES and commit to their values: personal and environmental sustainability, democratic management, transparency and equity. Consequently, they explicitly reject the disciplinary tradition of peer exploitation through unpaid work.

Community-based, self-governed initiatives have been defined as "commons" (Ostrom, 1990), identified as a governance alternative to the public/private dichotomy (Hardt and Negri, 2009) and hailed as a metropolitan phenomenon that can overcome the urban dynamics of capitalism (Stavrídes, 2016). They have significant grown since the 2000s and, providing local socio-economic and political initiatives, have strengthened mutual support networks

¹⁵ See XES Xarxa d'Economia Social i Solidària de Catalunya (Catalan Network of Solidarity Economy), www.xes.cat; and the Solidarity Economy Observatory Pam a Pam www.pamapam.org. Accessed 19.01.2022. See also Urban Commons in Barcelona: www.bcncomuns.net.

and created greater social and environmental justice (Sekulova, 2016).¹⁶ Commons can be produced and reproduced – an action defined as “commoning” by Peter Linebaugh (2009) – but it can also be corrupted (De Angelis, 2017), exclusionary or commodified (Harvey, 2013).

The co-production of the urban commons is closely linked to architectural practice. They are both grounded in specific spatial patterns at different scales (Katrini, 2019), with architects playing fundamental roles as designers and facilitators in defining the spatial conditions to increase local resilience (Petrescu et al., 2016). In these cases, resilient practices associated with commoning are directly related to four key principles – which can be identified in Barcelona’s collectives: situated, inasmuch they rely on local specificities; mediated, since there is an exchange between local communities and practitioners; networked and relational, based on mutual support among groups; and open source, in that they acknowledge the collective ownership of achievements (Baibarac and Petrescu, 2019).

Community architects understand architecture as a tool for social transformation and actively support community-based initiatives, often offering their technical knowledge on a voluntary basis or for little pay. This responsibility towards their local neighbourhood can be seen in the work of Lacol in Sants (engaging with struggles in Can Batlló, Figure II-2), Voltes in Vallcarca (creating an alternative masterplan), Oasiurbà (addressing substandard housing) and

¹⁶ The study by Barcelona Laboratory for Urban Environmental Justice and Sustainability (BCNUEJ) reports factors that contribute to community-based initiatives beyond “strong leadership and agency, existence of steady financial resources, or institutional support”, already identified. These are “a vacuum in the socio-political field, aspirations for economic and political autonomy, a shared history of social organization on the community level, and supportive, or non-constraining, institutional environment”; and factors that allow its survival: “a diversity of aspirations, adaptive organizational structure, and a diversity of political and income generation strategies, as well as strategic and targeted collaborations with public institutions” (Sekulova, 2016).

Straddle3 (designing the Sant Pau Social Gym), both in Raval, and Arqbag in el Vallès (working with the les Planes neighbourhood).



Figure II-2. Members of Lacol in an assembly in Can Batlló. Source: courtesy of Lacol.

To achieve a wider transformative impact and to overcome the limitations of architecture practices, members of the collectives are also members or promoters of other civic structures. For example, Lacol's experience in both the grassroots movements in Sants and la Borda cooperative housing resulted in the co-organisation and membership of different self-managed structures, such as la Dinamo Fundació (fostering cooperative housing, from 2016), Coopolis (Social and Solidarity Economy infrastructure, 2017).¹⁷ Celobert members became

¹⁷ In 2016, the Catalan government promoted a regional network of 14 *ateneus* (a Catalan institution, similar to a self-managed cultural association), among which was Coopolis in Barcelona, with the aim of implementing and strengthening the social economy.

involved in the creation of the housing cooperative *Sostre Cívic* in 2004 and later became part of the intercooperation project *Per Viure*, that offers professional interdisciplinary support to groups interested in the cooperative housing model. Sometimes community architects operate from cooperative clusters, buildings that gather initiatives from different professional sectors and offer a framework for mutual professional support, such as *Lacol in la Comunal* (eight cooperative initiatives), *Celobert in Grup Ecos* (16 cooperatives), or *Arqbag and Cíclica* (CRIT building in *ETSAV*).

In this regard, associationism as an intrinsic activity of architectural practices, and their affiliation to other intercooperative structures, can be read as both a result of social mobilisation and a driver for social transformation. Therefore, combining activism with everyday architectural practice becomes a trigger for socio-economic and political change from everyday practice; a practice of “commoning” that involves a bi-directional impact: “the process which characterises both the everyday strategies of societies in movement and the movements which politicise these strategies” (Stavrides, 2016, p.98).

The housing emergency played a fundamental role in the rise of social disputes, and had been already denounced by the UN Special Rapporteur on Adequate Housing (Kotari, 2007), before a real estate crisis was declared by the city council in 2016 (*Ajuntament de Barcelona and Patronat Municipal de l’Habitatge de Barcelona*, 2016). As an urgent response to the housing crisis, the agendas of both grassroots movements and municipalist policy are developing the cooperative housing model to include civic organisations and users in procuring affordable housing. Cooperative housing plays a central role in community architects' concerns both as political and professional agendas; they actively engage in the implementation of new housing models as designers, policy-makers – which shows that collectives understand architecture in broader

terms, not necessarily be a building but as a procedure or a policy – and in some cases even as residents. Remarkably, the municipality commissioned Celobert and Lacol to develop the “Plan for the Right to Housing in Barcelona 2016–2025” (Ajuntament de Barcelona, 2018). The convergence of social mobilisation and municipalist political agendas resulted in new design opportunities for architects, from the first community housing prototypes, such as *la Borda* (Lacol, 2014–2020, W02¹⁸), to competitions organised by the municipality for projects on public land in 2017 (5 plots of land, including *la Balma* by Lacol & La Boqueria, finished in 2021; and *Cirerers* by Celobert (2022, W03) and 2019 (*Sotrac* by Lacol, *la Regadora* by Arq̄bag, *La Quinta Força* by Llindarquitectura and myself, currently under development).

As well as their engagement with cooperative housing, community architects have been actively involved in the development of the *Agrupacions Tàctics de Repoblament Inclusiu* (ATRI, Tactical Accommodations of Inclusive Repopulation, W01).¹⁹ The ATRI multidisciplinary team developed feasibility studies, including the urban, legal, financial and social dimensions of affordable housing (Juarez Latimer-Knowles, 2021). ATRI instrumentalised housing as a tool for urban improvement, aiming to have an impact at every stage of the procurement process, from access to the land (filling in urban voids), public tenure competitions (redistributing economic impact), design and construction (based on John Habraken’s theory of supports and an assisted do-it-yourself/do-it-with-others process (Habraken et al., 2000)) to self-management.

Beyond the right to the city, three other key concerns motivate the work of community architects. First, a gender perspective and feminist agenda that

¹⁸ The alphanumeric codes refer to the case studies analysed with the Toolkit. More information can be found in Annexe 3.

¹⁹ See www.atri.city. Accessed on 13.04.2022. The ATRI system is also explained in a forthcoming book; the author had access to the manuscript.

builds on historical challenges and links feminist struggles to space (Hayden, 1981; Federici, 2012; Muxí Martínez, 2021). To some collectives, feminist design agendas are a specific starting point of their work, such as Col·lectiu Punt 6 (2014; 2019) and Equal Saree (Saldaña et al., 2019).

Secondly, resource scarcity, global climate emergency and financial crisis have resulted in strong environmental concerns and tactical thinking. For example, this has led to the use of experimental building materials in many cooperative housing projects (unprecedented on this scale in Barcelona), such as cross-laminated timber (CLT), rammed earth blocks (Arqbag) and passive energy systems (la Borda's greenhouse). Tactical thinking – including but not restricted to tactical urbanism (Lydon and Garcia, 2015) – aims to achieve the greatest impact with the least effort: for example, considering “no-construction” as a preferred execution option, with strategies that promote the reprogramming of buildings. Examples of this are “el contra-horari” (the counter-schedule) by Arqbag, a building reprogramming that optimised the use of school classrooms instead of expanding it.

Finally, there is an awareness of the pedagogical impact that the design and management of space produces in society at large. This includes technical and administration staff who are directly involved, residents and users, and visitors. This is most evident in cooperative housing and in school playgrounds, which some practices are focusing on as transformative spaces: Voltes, Straddle3, Arqbag (Arqbag et al., 2021), and Equal Saree (see Saldaña et al., 2019).

Aware of the little attention they receive in the specialist media and the importance of explaining their methods, since they differ from previous generations, collectives devote effort to publications in the form of digital

activist guides,²⁰ essays (among which are Celobert, 2014; Lacol and La Ciutat Invisible, 2018; Paisaje Transversal, 2018a; Col·lectiu Punt 6, 2019; Arqbag et al., 2021), toolkits (such as Col·lectiu Punt 6, 2014; Lacol, 2018; Saldaña et al., 2019), and online resources (for example www.el-recetario.net, www.grrr.tools).

In addition, these collectives employ documentary media to reach non-specialist publics. While the use of documentaries in architecture is not new, what has recently drawn attention to this medium is their use in making visible the social demands that architects support, thus becoming an explicit tool for taking a political stand. An example is the case of Santiago Cirujeda and the critique of the real estate bubble in Spain and its causes (Spanish Dream (€spanish Dr€am), 2009), or Lacol and the urban struggle around the Can Batlló complex in Sants neighbourhood, Barcelona (Com un Gegant Invisible. Can Batlló i les Ciutats Imaginàries, 2012).

DISCIPLINARY SHIFT IN ACADEMIA

In both the public polytechnic engineering-based schools of architecture in Barcelona, the Escola Politècnica d'Arquitectura de Barcelona (ETSAB) and Escola Politècnica d'Arquitectura del Vallès (ETSAV), an increasing number of design studios are shifting towards architectural pedagogies that promote social transformation. Although these teaching methods are not new in a wider international context, their implementation at UPC and the way how awareness of the importance of a political element in architects' education at ETSAB and ETSAV is created is unique.

²⁰ Guías para la activación de espacios de Arquitecturas Colectivas (Guides for the activation of spaces of Collective Architecture), available at <https://www.arquitecturascolectivas.net>. Accessed 01.01.2022.

Following Pere Riera's pedagogy of "action as thought" and "thinking with the hands and with the body", implemented at ETSAV from 1978 to 1980 (Riera, 1987), new pedagogies were fostered through initiatives such as Projectes d'Arquitectura i Sostenibilitat (Architecture and Sustainability Projects, PauS), which began in 2006, and studio units such as TAP 4 and TAP-PUD. They developed and built experimental sustainable prototypes, including a prototype for the Solar Decathlon Europe (SDE) competitions. Some of the pavilions were reassembled in the Vallès region as community facilities following agreements with municipalities.²¹ Further agreements between the school and the local authority enabled the development of the platform Projectos de Acción Social a través de la Participación la Arquitectura i la Sotenibilidad (Pas a Pas, Projects of Social Action through Participation in Architecture and Sustainability, W05).²²

These projects create a direct relationship with specific neighbourhoods and local communities, connecting thorough live studios²³ students with specific social problems and needs. This produces an awareness of diverse social situations, while forcing students to develop non-expert communication tools and language. Secondly, projects have a short-term but direct impact on the city

²¹ 2010 entry LOW 3 became a living lab in ETSAV campus (CISOL- Centre d'Investigació Solar de l' ETSAV. Torsten Masseur i Laia Núñez <http://livinglab-low3.blogspot.com>.), 2012 (e)co was installed firstly in ETSAV and later in les Planes as a community space (www.eco.upc.edu; www.arqbag.coop/prototip-eco.), 2014 Ressoró (winner of the SDE 2014) as a civic centre in Sant Muç Rubí (www.reaccioresso.net. <http://www.desantmuç.com>.). Websites accessed 01.02.2021.

²² Pas a Pas was a group that included residents, representatives from the Sant Cugat municipal council, ETSAV university, Arqbag architects' cooperative, Fundació Engrunes and private companies to develop four permanent urban interventions starting in 2014, including the community centre (e)co platform, housing energy refurbishment (REC), improvements in street accessibility (Ringo Rango Route), and roofing an outdoor sports field (Coberta Espai Pere Grau). See www.projectepasapas.wixsite.com/pasapaslesplanes/inicio and www.arqbag.coop. Accessed 01.02.2021.

²³ Under the name of "live projects" this teaching method was originally implemented at Sheffield School of Architecture in the 1990s and many other schools since then. SSoA: www.liveprojects.org. Accessed 01.12.2021.

by being built, which is a social return by a public university to the city (Figure II-3). Through “learning by doing”, students gain knowledge of building and technical problems and put theoretical knowledge into practice. Students' designs are then assessed against the process and objective goals (feasibility, economy, resources management, collaborative approach, users' opinion, etc.). In other words, the project is justified and assessed not by what is put on paper, but also regarding contingent reality.²⁴ Finally, and as a driver and consequence of the inclusion of users in the process, social sciences methods are incorporated into architectural practice. This provides new, distinct learning skills, both technical – derived from direct construction – and social – emerging from contact with reality.

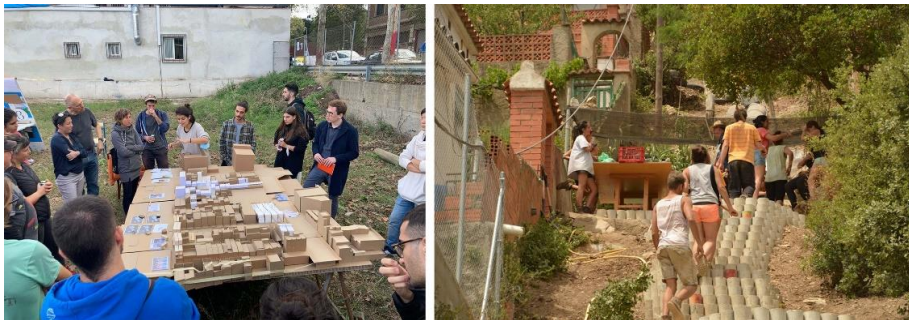


Figure II-3. Left: *Arquitectos de Cabecera (ETSAB) studio, regeneration of waste land with a community activity. Source: AC Archive. Right: construction by students of the Ringo Rango Route (les Planes, within the Pas a Pas project), TAP-PUD studio at ETSAB, 2015.*

In the case of ETSAB, and operating between academia and practice, *Arquitectos de Cabecera (AC)* is a studio unit and an association that aims to bring the role of the architect closer to the citizen, operating as a local technical

²⁴ International precedents include Rural Studio in the US, Rural Urban Framework in Hong Kong, and die Baupiloten in Germany.

consultation office for local residents including long term projects, live studios and tactical urban actions.

These action pedagogies are evidence of the potential impact of academia beyond schools of architecture. On the one hand, the impact of their projects and architectural discourse turns them into practices in their own right:²⁵ they develop projects from diagnosis to execution and post-occupancy evaluation, manage resources (material, economic and personal), negotiate with other stakeholders (the municipal administration, residents, donors) and they produce and effect change in the urban space (whether temporary or permanent). On the other, learning social skills and contact with reality translates into an awareness of how architecture interacts with the dynamics around it (social, economic, etc.), in one way or another, addressing the social impact of architecture as a practice and their role as architects. The social and political awareness in architecture training translates into what de Carlo (2009) defines as “a different way of doing architecture for the edification of a different world”.

Hereby studio dynamics become crucial in managing the expectations of graduates' future professional practices, shifting from the traditional studio competition to fostering an attitude of collaboration by developing a single project in the studio. In doing so, architecture schools become incubators for architects' collectives and cooperatives. An example is Lacol, which was founded by students at ETSAB working on their diploma projects in the Sants neighbourhood, or Arqbag and MUT, who first formed as teams for the 2012 and 2020 (e)co Solar Decathlon respectively. In addition, some members of

²⁵ A claim that Beatriz Colomina makes in what she calls “Radical Pedagogies”, that questioned the traditional respective academic and institutional contexts, challenging architectural education both in terms of impact – often including politicised situations – and methods – collaborative work, horizontality, and working outside the educational space (Colomina et al., 2015).

collective and cooperative practices such as Celobert, Voltes, and el Tinglado, were members of ETSAB's Espai Social de Formació d'Arquitectura (ESFA, Social Space for Architecture Training), initiated in 1997 by the students' union and still operating.²⁶ ESFA is a voluntary student-run association that aims to fill the gaps left by the school's curriculum as identified by students who organise courses on topics such as bio-construction, anthropology, architecture and feminism, architecture and healthcare, developing projects in the Global South and pioneering courses on architecture and participation.

THE (RE)EMERGENCE OF COMMUNITY ARCHITECTS

The historical socio-political agendas of architects in Spain have arguably been overlooked. Despite representing a minority in Barcelona's architectural practice, several examples from the early twentieth century to the present evidence architects' awareness of social and political concerns. For example, during the Second Spanish Republic (1931-39), a turbulent period dominated by transformative left-wing politics, the Grup d'Arquitectes i Tècnics Catalans per al Progrés de l'Arquitectura Contemporània (GATCPAC, Group of Architects and Catalan Technicians for the Progress of Contemporary Architecture)²⁷ defended a new urban economy based on the socialisation of urban property, the collectivisation of industry and work – including the production of building materials and construction professionals – framed by a critique of capitalist modes of urban transformation and speculation and a claim to adequate housing as a right (Cárdenas and Fernández, 2018). As a result of their political engagement, many members of GATPAC were forced into exile in 1939 during

²⁶ See esfabcn.wordpress.com. Accessed 01.03.2020. I was also member of ESFA during my studies at ETSAB.

²⁷ Active during the 1930s, members included Josep Lluís Sert, Josep Torres Clavé and Sixte Illescas among others.

the Spanish Civil War. A few decades later, during the Spanish dictatorship (1939–1975), Grup R²⁸ aspired to a cultural modernisation of the country and protested against urban masterplans developed by the dictatorship, critiquing traditional academic education and organising urbanism courses at ETSAB in sociology, economy and politics (Grup R and Centre de Cultura Contemporània de Barcelona, 1997).²⁹

Moviments Socials Urbans (MSU, Urban Social Movements) have been widely recognised as active drivers of Barcelona's urban transformation (Domingo i Clota and Bonet i Casas, 1998; FAVB, 2010; Magro Huertas, 2014). But they are also an outcome of the city's particular structure: their emergence was driven by the compact and dense nature of the city's urban pattern (Borja, 2013). In her exhaustive analysis of the role of social movements in the transformation of Barcelona from 1969 to 1979, Tania Magro Huertas (2014) documents initiatives in which anonymous architects provided technical advice to social movements and actively participated in neighbourhood assemblies. Architects voluntarily offered technical support to neighbours' claims, enabling neighbourhood arguments to be balanced with those of planners and decision-makers from the city administration, for example the need for public facilities in deprived neighbourhoods or collaborating with the *Plans Populars* (also named counter plans), organised by neighbourhood associations to challenge official masterplans in areas residents spotted as opportunities. One of the most remarkable proposals was developed by ETSAB's Laboratori d'Urbanisme

²⁸ Active during the decade 1951–61. Their members included, among others, Jose Antonio Coderch, Manuel Valls, Antoni de Moragas, Josep Maria Sostres, Oriol Bohigas, Josep Maria Martorell, Joaquim Gili and Josep Pratmarsó.

²⁹ The courses were influenced by international trends, particularly in France and UK. Courses were held on "Economy and Urbanism" (1958) and "Sociology and Urbanism" (1959) (Grup R and Centre de Cultura Contemporània de Barcelona, 1997).

(LUB, Laboratory of Urbanism)³⁰ developed in 1974 in east Barcelona. The LUB's proposal critiqued capitalist urban renewal and land speculation by the public administration, explaining the proposal through different local interests and stakeholder agendas while promoting a “conscious intervention” that showed an explicit political awareness of both urban patterns and social forces (Solà-Morales et al., 1974).

The Col·legi Oficial d'Arquitectes de Catalunya (COAC, Catalan Architects Official Association) set up the Oficina Información Urbanística (OIU, Office for Urban Information, operational until 1974), a public office that offered technical assistance to social movements and a neighbourhood-level assessment of planning, including reporting irregular urban developments. Additionally, the COAC architecture journal, *Quaderns d'Arquitectura i Urbanisme* was an important tool to communicate technical planning information to grassroots movements between 1970 and 1977.

In this context emerged the figure of Xavier Valls, architect and municipal planner in Santa Coloma de Gramenet (metropolitan Barcelona), who advocated that local government should fulfil the real needs of the city through the formation of neighbourhood associations and their inclusion in decision-making (Figure II-4). In 1978, Valls developed the Popular Plan for an Urban Alternative for Santa Coloma de Gramenet, a pioneering initiative in terms of incorporating social movements as political voices with the right, and the established protocols, to make direct requests to local authority technicians (Madueño, 1988).³¹

³⁰ Laboratori d'Urbanisme is a urban studies research group based in ETSAB since 1968, originally led by Ignasi de Solà Morales and still active. See www.lub.upc.edu. Accessed 01.02.20.

³¹ Unfortunately, this advanced urban proposal was never executed, due to Valls' decease in a car bomb attack in 1987 in Barcelona placed by the Basque separatist organisation ETA in the lower basement of a Hipercor supermarket, which killed 21 people. With the perspective



Figure II-4. Xavier Valls presenting the Pla Popular for Santa Coloma (Madueño, 1988, p.49).

For Magro Huertas (2014), the 1970s was an aligid moment of social action, since the emerging democracy³² allowed activists to be part of new or reconfigured local government institutions to promote social measures. According to her, the collaboration between social movements and local authorities lasted until 1986, when Barcelona’s winning bid to become the next Olympic city shifted municipal political agendas toward capitalist urban transformation in which social issues were increasingly sidelined.

By the 2000s, grassroots claims against local government urban developments linked to liberal agendas prompted a re-evaluation of architecture, mostly by a generation of younger architects – the ones that became referents for those who engaged with 15M a decade later. This re-evaluation was influenced by the growth of schools of architecture across the country during the first decade of democracy (after 1975), which allowed people from a wider

of time, the potential impact of Valls’ Pla Popular is incalculable as a precedent for community-led urban practices since it could have been a catalyst for a shift in many other municipal initiatives.

³² The period between 1975 and 1982 is known as “the transition”, framed by the death of the dictator Francisco Franco and the first General Elections in Spain in 1982. In between these, the Spanish constitution was approved in 1978.

spectrum of society, rather than just those from wealthy backgrounds, to access university education.³³

The transformation of the Pou de la Figuera (Well of the Fig Tree) square, in the early 2000s, popularly called Forat de la Vergonya (Hole of Shame), became paradigmatic of recent issues of social contestation and architectural engagement. As part of the *esponjament*³⁴ urban transformation strategy, the Forat struggle represented a key moment in the transition from the “Barcelona Model” to the “Brand Barcelona”, with architecture subjugated to political and economic power (Scarnato, 2016). In a lengthy process, the planned transformation led during its implementation to a disputes between the city council and social organisations over the management and design of the square, which included occasional episodes of violence (Gurgo, 2009; Scarnato, 2016). Stefanie von Heeren (2002) emphasises that the authoritarian attitude of the city council made locals feel helpless; they did not identify with the urban transformation that only benefited private interests and lacked a “responsible attitude” towards the population, urban heritage and public finance. The ensuing long negotiation between heterogeneous groups of neighbours and the local government administration was addressed by the latter with one of the first attempts to incorporate participatory design methods into the city of Barcelona’s civic provision. However, Col·lectiu REpensar Barcelona (2008) criticised the participatory process as fake, only pretending to seek consensus in order to continue with construction work. According to them, this was a missed

³³ For a detailed history of architecture schools in Spain see (ANECA. National Agency for the Quality Assessment and Accreditation of Spain, 2005, annex 1, pp.327-399).

³⁴ *Esponjament* literally translates as ‘expungement’. It was a strategy developed by the local authority to strategically demolish buildings in poor conditions of Ciutat Vella (Barcelona’s old city) to alleviate the lack of public space.

opportunity due to a lack of transparency and participatory methods, creating mistrust towards the local authority instead (Figure II-5).



Figure II-5. Three scenes from the Forat de la Vergonya struggle. Top left: pamphlet by the municipality calling for participation in 2005, that includes at the top a “participation form” where opinions and suggestions could be presented in written form. Source: top left: ASFE Archive, courtesy of Matteo Caravatti. Top right: the municipal approach to “participation” contrasted with citizens’ direct engagement in transforming and self-managing the space (top right, source: catalunya.asfes.org). Below: the presence of police evidenced the tensions in the disputed area. In the front of the picture, the garden planted by neighbours before its demolition by the public local government. (Source below: libcom.org).

What is of particular interest to this research, is to understand the involvement of architects in different stakeholder bodies,³⁵ ranging from local authority technical staff (Marc Aureli Santos), to members of neighbourhood associations (Hubertus Poppinghaus and Enric Mir), independent designers (Jaume Artigues and Pere Riera) and, crucially to external stakeholders who are not affiliated to any organisation, both members of ETSAB's student association ESFA³⁶ and, especially, the 4th World working group of Arquitectos sin fronteras España (ASFE, Architects Without Borders Spain). Similar to what Magro Huertas described, ASFE architects positioned themselves as external technical advisors to support residents' claims over the design and management of the space, and to provide technical arguments to counter the technical restrictions presented by the local authority. However, their mediating role was not neutral but, on the contrary, took a critical position.³⁷

Contemporary to the Forat struggle, during the preparation for the 2004 Culture Forum ASFE exposed the contradictions of the urban development of

³⁵ As part of a body of research which has not finally been included in the PhD, the author interviewed and recorded the following stakeholders of this urban transformation. All were done in person, except that with Matteo Caravatti who lives in Italy. Jaume López, political scientist, on 23.10.2019; Matteo Caravatti, architect from ASFE, on 1.11.2019; Maria Mas, president of the neighbourhood association *AAVV Casc Antic*, on 13.11.2019; Jaume Artigues, architect and urban co-designer of the space, on 19.11.2019; Hubertus Poppinghaus, architect and president of the neighbourhood association *Veïns en Defensa Barcelona Vella* (Neighbourhoods in defense of old Barcelona), on 10.12.2019; Aldà Almirall, worker at the self-managed facility *Casal de Barri Pou de la Figuera* (Neighbourhood Centre Well of the Fig Tree), on 12.12.2019, and Marc Aureli Santos, architect, director of "projects and works" at the development agency *Focivesa*, on 15.01.2020.

³⁶ *Espai Social de Formació d'Arquitectura* (ESFA, Social Space for Architecture Training).

³⁷ In particular the Italian architect Matteo Caravatti, who lived in the neighbourhood, was recognized by all interviewees as the most active architect from ASFE. Caravatti's commitment to residents included his arrest in a protest during the Forat struggle. Other architects involved, mentioned during an interview with Caravatti, were Marta Sanchez (who had a close relation to *AAVV Casc Antic*), Nacho Canela and Maribel Cadenas (architects from Sevilla, *grupo Arquitectura y Compromiso Social*), Elsa Lopez, Hugo Acuna, Emanuela Bove, Rosa Duminuco, Chiara Gugliotta and Luciana Pinto (from ASFE).

Barcelona through a campaign to make visible urban struggles and municipal impositions (Figure II-6 left). Likewise, the collective REpensar Barcelona (REthink Barcelona), that included architects Straddle3, presented a self-published manifesto and report on urban struggles from 2000 to 2008, which denounced the “false participation” in urban transformations led by the city council that led to a systematic destruction of historical heritage and identity or urban renewal projects driven by liberal agendas that hastened processes of gentrification (Col·lectiu REpensar Barcelona, Grup de Participació, 2008). Interestingly, a “Powergram” appeared in each of the seven case studies analysed; a diagram that mapped out the social forces at play, including administrative agencies and departments and different neighbourhood associations (Figure II-6 right). It was during this period that ETSAB’s ESFA organised pioneering courses in architecture and participation.³⁸

Increasingly over the following years many Spanish collectives gathered around digital networking technologies, for example through Arquitecturas Colectivas (Collective Architecture)³⁹ and Inteligencias Colectivas (Collective Intelligences)⁴⁰ which served as platforms for event organisation and enabled collaboration and exchange between established and emerging practices. This formed the context for a re-emergence of community architects in Barcelona and a questioning of the architectural profession in Spain.

³⁸ Organized by Maria Josep Lazaro and Nuria Colomer, later members of Celobert architects cooperative. The courses became an optional curricular subject thanks to the collaboration with professor of urbanism Miquel Domingo (co-author of *Barcelona and Social Urban Movements*, Domingo, 1998). In three editions, the subject addresses current conflicts in the city. 2007: Pla Caufec in Sant Just, the urbanisation of a natural area. 2008: Barceloneta and the Elevators Plan. 2009: Bon Pastor, the demolition of a housing polygon. The author participated in the organisation of the 2008 and 2009 editions.

³⁹ See www.arquitecturascolectivas.net. Accessed 01.02.2020.

⁴⁰ See www.inteligenciascolectivas.org. Accessed 01.02.2020.

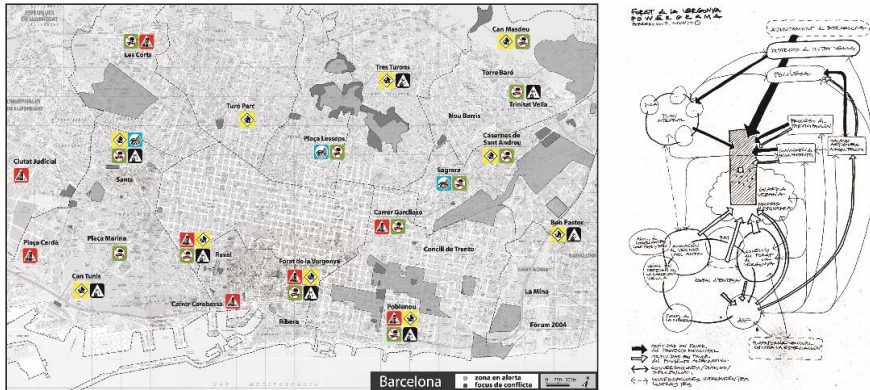


Figure II-6. Left: Mapping of urban struggles in Barcelona, differentiating "zones under alert" and "conflict areas", c. 2004. Source: ASFE Archive, courtesy of Matteo Caravatti. Right: Powergram of Forat de la Vergonya struggle, depicting the forces at play, including municipal agencies and public institutions, residents' associations (heterogeneous and with different interests), and architects.

Despite an increase in collectives and collaborative practices, the architectural media and discourses in academia ignored community and collaborative approaches. It was only in 2012, a year after 15-M, that *Arquitectura viva*, one of the mainstream Spanish architecture journals, focused on these issues in "Spanish Collectives: New forms of Work: Networks and Platforms" (Fernández Galiano, 2012).⁴¹ The journal described the "plural ecosystem" of Spanish collectives and their practice,⁴² emphasising how members of the collective disrupted the tradition of architectural training in Spain – that is, the apprenticeship to master architects model – in aiming for a self-training

⁴¹ The publication of the issue was followed by an internal debate on *Arquitecturas Colectivas* website on the curatorial selection by the journal and the partial visualisation of the collectives' work. See: www.arquitecturascolectivas.net/herramientas/grupos/sobre-la-publicacion-en-la-revista-arquitectura-viva. Accessed 18.01.2022.

⁴² In 2019, almost a decade after the publication of the *Arquitectura Viva* article, 21 out of the 48 collectives listed had been dissolved, whereas 27 continue with their activity. These platforms were consolidated in several different ways, from architects' cooperatives, companies and collectives to think tanks.

component in response to a changing reality. This need for self-education resulted in a reevaluation of architectural tools and the inclusion of more diverse design methods by new collectives. The systematic analysis and cataloguing of these new disciplinary tools are presented in the Collaborative Architecture Toolkit.

III.

THE ARCHITECT AS MEDIATOR

“Architecture is too important to be left to architects alone.
Like a crime, it is a problem for society as a whole.”
— Berthold Lubetkin, 1985

The politicisation of urban life after 15-M, increased the disciplinary awareness of the city as a political framework: disputes between stakeholders who claimed their right and legitimacy to intervene in the city; struggles for power and dominance and resistance to the implementation of political and economic agendas; economic interests conflicting with citizens’ rights, and housing ownership and city management models with direct consequences for social inequality and urban segregation. In the city where different socio-political agendas meet, architects are becoming proactive stakeholders in decision-making processes and negotiation of diverging interests.

Lacol argues that:

we do not participate in what we want but rather on what they allow us.
More concretely, on what does not interfere with the interests of the

economic elite. It is only possible to participate in the accessories, never on the basics.” (Lacol, 2018, p.28).⁴³

Along these lines, the young planning practice Paisaje Transversal from Madrid, argues that:

we are allowed to reuse empty lots or buildings, but our access to the large operations that draw the future of our cities is vetoed. Power delimits our own margin for manoeuvring with controlled experiments. With these, power meets a double objective: it offers us entertainment and a patina of social engagement as expected by political correctness (Paisaje Transversal, 2018b, p.16).

Despite Arnstein’s (1969) “ladder of citizen participation” that classified decision-making in plans and/or programmes in relation to power, “participation” is a term that has become over-used, describing too many different processes with diverging agendas. Nowadays, any kind of citizen engagement promoted by local governments is typically labelled “participation” or “participatory process”, yet without considering the explicit power-related issues that were essential to Arnstein’s notion of participation. An example was discussed in the Chapter II in relation to Forat de la Vergonya, where “participation” was interpreted in opposite ways by the city council and local residents. “Empty rituals” of participation, as Arnstein noted, may be used by opportunistic political agendas to legitimise decisions by “experts” under the false appearance of democratisation, instead of articulating real and effective citizen engagement in local authority decision-making

⁴³ Lacol present as evidence the declaration of Barcelona’s Mayor Xavier Trias (2011–15) about the polemic consultation to transform Diagonal avenue-in 2010, under mayor Jordi Hereu (2006–11): “What will we ask about? It’s all the same to me if this part of the street is a boulevard or a Rambla, so let’s put it up for consultation and let the people decide” (Trias as quoted in Lacol, 2018, p.29).

The engagement of citizens in urban decision-making has been the focus of constant debate. Its supporters argue that this is an essential process of democratising urban decision-making. They see it as a practice of the “right to the city” at both a discursive and a practical level, offering opportunities to improve projects by sharing ideas and enhancing neighbourhood-level networks of mutual support and peer learning. Its detractors argue that it is impossible to operate, time consuming, inefficient and relies on volunteers, with decisions potentially taken without sufficient information.⁴⁴ In addition, it is prone to causing conflict (seen as negative). A typical argument by those sceptical of users engagement in urban decision-making is an analogy to surgery, where the only opinion that matters is that of the expert surgeon.⁴⁵ Despite the obvious differences between the two scenarios, what lies at its heart is a fear of a lack of strategic vision and technical expertise by lay people, particularly when projects entail a geographic or infrastructural dimension and include a significant number of participants or technically complex decisions.

The underlying dispute derives from different core values: direct democracy as a right versus time-efficiency and pragmatism. In addition, while detractors understand the delivery of tangible outcomes as the main goal of the process, supporters see the process as an outcome in itself, as society learns to improve self-governance and political awareness. Notably, both have opposite views of the user: as proactive and aware or as a passive receiver of (public) policies and services.

Given that this is a project-based PhD thesis, the crucial classification by Arnstein falls short of capturing a whole procurement process in a linear

⁴⁴ De Carlo’s argument that it is in designers’ best interests to include residents since they will improve the design and produce a deeper acceptance of the building can be read as a form of pragmatism in favour of citizen engagement (de Carlo, 2009).

⁴⁵ This argument has also been presented to the author in academic discussions.

relationship conceived as a ladder. Citizen engagement is neither a binary issue nor a one-off event, but an action that can take place over time with different intensities by heterogeneous groups of people. Thus, I avoid the terms “participation” and “participative process” and refer to distinct participative methods developed in specific moments of design processes. This differentiation shifts the discussion from “is this participation?” to a focus on “what do certain decision-making design methods produce in each stage?”, incorporating the dimension of time and architects agency in procurement process. To unpack this further, I explore how participative methods become articulated around specific design decisions, producing distinctive outcomes in terms of both design and governance. In other words, I study how an architectural project becomes an instrument for civic engagement in city governance and, reversely, how civic engagement becomes an opportunity to improve the design and appropriation of architecture.

Through this, the Toolkit’s analysis of collaborative design methods allows the clarification of key decisions and stakeholder engagement at specific moments of procurement, which can be summarised as follows – each Toolkit chapter has been given an alphabetical code that will be used for further referencing.

The architectural project is understood as the transformation, whether physical or not, that takes place between an existing and a future spatial condition (Figure III-1). It is divided into three phases. First, Diagnosis to understand existing needs and problems, relates to chapters G. Data Gathering and C. Projective Cartography. Then the Proposal, whether built or not, that includes A. Analysis & Strategy, D. Design and E. Execution phases. Finally, Use during P. Post-occupancy, which includes building use and potential evaluation to

generate know-how outputs and learning. Two intersecting stages sit at the core: M. Process Management and S. Stakeholders.

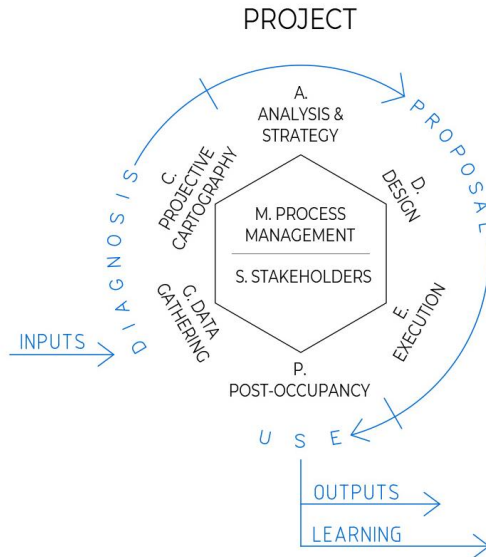


Figure III-1. Typical stages in a procurement project.

From this point, stages can be broken down in more detailed stages, and key decisions in each of the stages can be identified (Figure III-2, middle row):

Intersecting issues:

P. Process management & S. Stakeholders: the design of the process itself and leadership, which can vary at different stages. Includes the definition of phases, and stakeholders' roles, agency and responsibilities.

Diagnostic stage:

G. Data gathering: what is asked, how and for whom become a determinant for future phases.

C. Projective Cartography: representation of gathered data in the form of drawings, diagrams, descriptions, etc., to enable further strategic discussions. Identification of problems, needs and opportunities.

Proposal stage:

A. Analysis & Strategy: evaluation of data and definition of socio-spatial needs, aims and the strategies to achieve them, as well as goals and programme. Likewise, qualitative discussion about direct and indirect beneficiaries, priorities, and determining evaluation indicators.

D. Design: translation of previous phases in a specific construction or managerial designs. This phase addresses issues of typology and standards, technical decisions, materiality, and aesthetics linked to identity and culture.

E. Execution: its construction, which can be either tactical (short-term) or strategic (linked to planning), can include methods for involving users in construction to different degrees.

Post-occupancy stage:

P. Post-occupancy, at a use level, includes occupation and management, with appropriation, manipulation and performance improvements. At a management level, it includes the evaluation of the process and building use, and the transfer of know-how for

further model improvement and application of methods in further projects.

When these procurement phases are cross-referenced with Arnstein's vertical power relations, a double-entry table allows participative design methods to be broken down into stages and the identification of key decisions in each of them (Figure III-2, below).

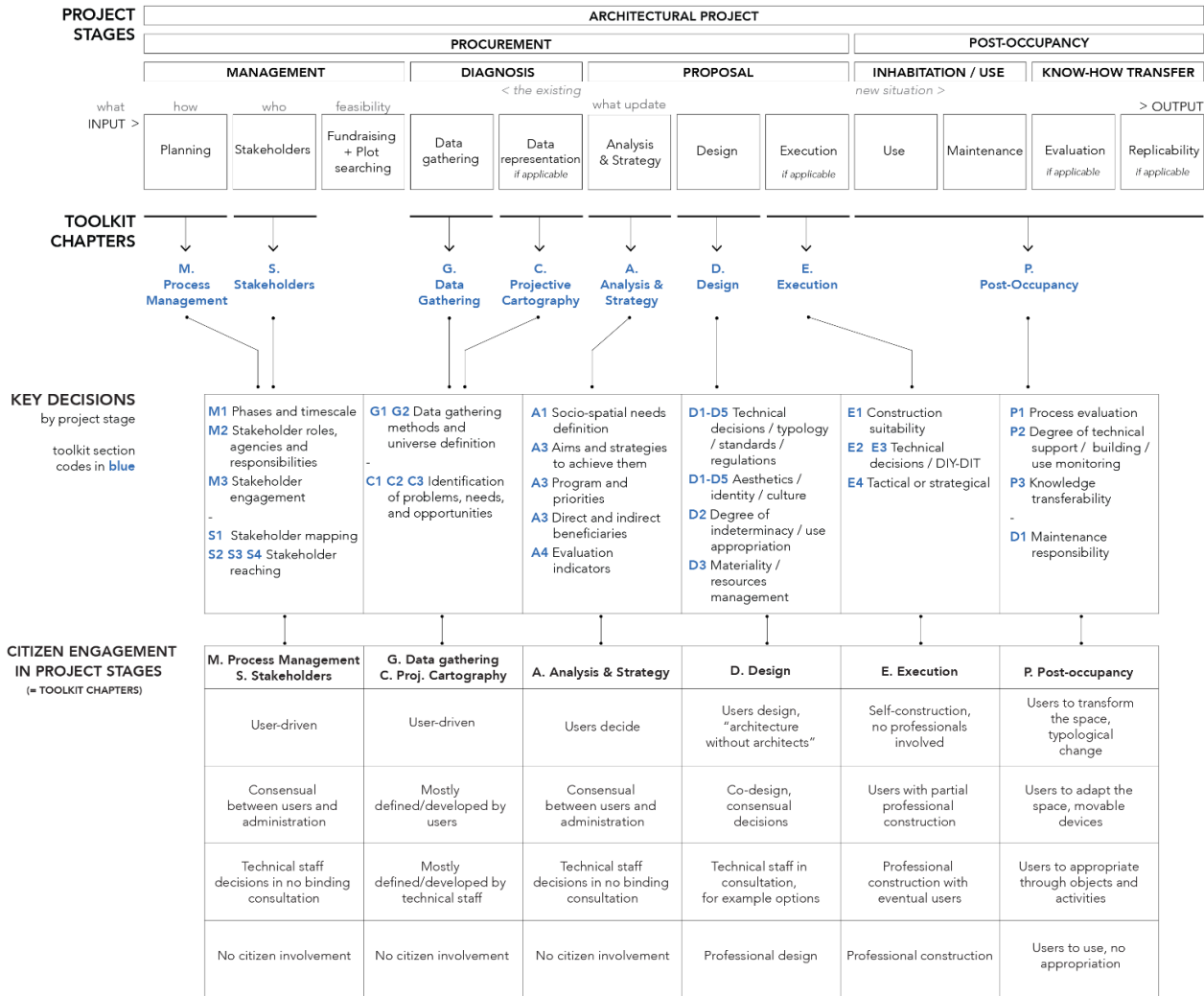


Figure III-2. Analytical diagram of decision-making in the architectural project. Top section: the architectural project is split into two main phases: Procurement and Post-occupancy. In turn, these are split into five different phases (Management, Diagnosis, Proposal, Inhabitation / use, and Know-how transfer), each of them including sub-phases linked to Toolkit chapters in blue). Centre: key decisions that are taken in each stage (Toolkit section codes are shown in blue; Toolkit section titles have been omitted). Below: decision-making ladder citizen engagement concerning architecture procurement stages and key decisions in them.

The analysis following the structure of this table aims to clarify how citizen engage with procurement and design decisions in an architectural project. While “participatory processes” are typically limited to the data-gathering phase, with citizen engagement taking place during initial consultation to start the process, it commonly excludes strategic decisions taken throughout all other stages, with users often not consulted again until the post-occupancy stage. This undermines the value of collaborative architecture, as some stakeholders view this as ineffective and manipulative. In all the stages, the nature of the key decision should be also interrogated: what should be done is a question that is distinct from how to achieve it.

The question is now a dual one, intertwining legitimacy and expertise. First, whose opinion is more relevant at what stage to achieve the best result possible. Second, the key question for architects is how this process can be translated into design inputs at different stages to improve architectural projects in terms of their response to social needs. In other words, how can an equilibrium be found between the knowledge of professionals and the undeniable right of citizens? Which architecture tools and design processes might emerge from this?

As discussed by Eugene Mullan (2005) and confirmed by Díaz García (2015), being high up in the Arnstein ladder is not necessarily better, as this depends on the specific situation; what is more relevant is that people have the chance to be involved in a way they find satisfactory and that offers them a

sufficient degree of control over their environment. In addition, Cembranos and Medina (2003) argue that in negotiating divergences, agreed minimums are often satisfactory for the parties involved. The difficult consensus relies on the fact that different stakeholders might disagree on what is considered the appropriate level of engagement or the minimum agreement in different situations – that is, the balance between direct democracy and representation through professionals (politicians, designers, decision-makers, etc.). This is an open question in Spain, given a lack of culture of citizen engagement and a mutual mistrust between politicians and citizens. The risk here is that political decisions are hidden behind technical arguments. Or, as pointed out by Lacol and Paisaje Transversal, that citizen engagement is limited to minor decisions and does not include structural matters. In addition, several factors may undermine the process quite rapidly – for example, the suspicion of hidden agendas – financial, political, propagandistic, etc. –, the lack of a guarantee that agreements will be respected, the lack of social inclusivity, the lack of transparent communication channels, etc. In the long term, if expectations that are created by the developer at the beginning of the process not being met, a sense of mistrust towards these processes might emerge.

This shows the paramount importance of architects and planners to operate autonomously without being politically influenced by other stakeholders. The architect is always positioned between the client, the user and the developer, each having their own interests. These profiles might be embodied in the same stakeholders, or sometimes in an intricate web of relationships that includes different bodies such as administrative departments, public or private procurement agencies, private stakeholders, and civic groups like housing cooperatives, associations, local residents and users. When the role of the architect overlaps with project decision-making (Figure III-2), four key terms emerge:

- a) leadership of the process, including management and deciding on the agency and roles of stakeholders;
- b) power asymmetries, in terms of whose agendas does the project responds to;
- c) knowledge asymmetries between professionals and non-professionals; and
- d) asymmetrical relations in professional and stakeholders responsibilities.

The two first terms are linked to power relations in decision-making, which directly affects architects but operates at a managerial level. The last two issues directly address professional roles, often claimed as a task exclusive to architects in that it concerns design, despite the fact that this is inevitably influenced by, at least, developers and clients. The position of architects between different forces of power at play and stakeholders who claim agency represents a challenge for architects' disciplinary expertise at all levels. However, the inclusion of different stakeholders and users should not mean that the architect's knowledge and responsibility is jettisoned. The challenge is thus to balance power relations without giving up architectural expertise and responsibilities. On the one hand, having an uncritical attitude towards design briefs (regarding their socio-economic or regional impact) may be seen as professionally unethical. On the other, the uncritical acceptance of someone else's decisions, for example by users, might entail an abdication of professional responsibility.

ARCHITECTS AND POWER:

MANAGEMENT , LEADERSHIP, AND STRATEGIC DECISIONS

Defining decision-making protocols during the management stage has a decisive impact on the outcome of the project. Thus, the first stage entails the crucial definitions of the rules of the game before it begins. In other words: who decides

who sits at the table and who is left out, the definition of the engagement and agency of the different stakeholders, the definition of the procurement phases with specific aims, and whether crucial definitions of aims and evaluation criteria will be consensual or not.

In this regard, it is important to distinguish who finances the project from who leads it (Figure III-3). Despite this classification being an oversimplification of a more complex situation that includes other entities with multiple legal forms, and to which many nuances can be added, it allows for a discussion of the framework in which architects operate. Architects and designers can employ collaborative design tools in each of the situations presented in the table, although be conditioned by financial and leadership bodies.

	Administration-financed	Privately-financed	Community-financed
Administration-led	Public procurement in leadership and investment. Example: public housing, public space.	Administration sets the ground for private investment and development (and derived benefit). Example: 22@ masterplan in Barcelona.	-
Privately-led	Co-financial private-public under the leadership of private investment. Example: real estate investor supported by public administration.	Private procurement. Example: real estate investments.	-
Community-led	Administration finances but allows the local community development (social and architectural project). Example: Coopolis warehouse, Can Batlló, Lacol architects.	A private investment that allows community management. Example: la Comunal, Lacol architects: private property and investment, but community-led.	The local community develops a project both in terms of leadership and financial resource. Example: cooperative housing without public funding.

Figure III-3. Procurement classified by finance and leadership. Leadership can be variable in different stages. Likewise, finance includes different potential sources, from direct investment to the ceding of land or facilities.

In this regard, the relationship between space, power and design was underscored by Lefebvre:

Spatial practice regulates life - it does not create it. Space has no power 'in itself', nor does space as such determine spatial contradictions. These

are contradictions of society, as for example between the forces and relations of production – that simply emerge in space, at the level of space, and so engender the contradictions of space. (Lefebvre, 2013 [1974], p.358).

If architects (and urban planners) do indeed have a representation of space, whence does it derive? Whose interests are served when it becomes 'operational' ? (Lefebvre, 2013 [1974], p.44).⁴⁶

The servitude of architects to dominant political and economic powers has been a frequent subject of architectural critique (Willis, 1995; Spencer, 2016). Giancarlo de Carlo (2009 [1969]) described how architects' deliberate decision to address only the interests of a certain elite class (deriving from economic dependence) meant that architecture was alienated from socio-political conditions, ignoring the economic, social, cultural and aesthetic values of non-privileged sectors of society and legitimising those in power through cultural coding. Instead, de Carlo asserted the necessity of understanding the political dimension of architecture and argued for a reconsideration of the architect's contribution to society. Practising architecture necessitates taking a stand (Figure III-4). Arguably, even the denial of a political position in contested urban transformations is the political position of accepting the *status quo*.

⁴⁶ Both quotes are an excerpt from an English edition of the book, published by Blackwell in 1991 and translated by Donal Nicholson-Smith. The bibliography entry refers to a Spanish edition.



Source gallica.bnf.fr / Bibliothèque nationale de France

Figure III-4. "Urbanism is a political act at the service of people". Poster during the May 1968 protests in Paris announcing a public debate regarding housing policies. Source: Sorce Gallica.bnf.fr, Bibliothèque Nationale de France, available online.

At the same time, the dependence of architects on developers and investors should be interrogated. Architects are often bound in the implementation of projects to developers' political agendas, since they are necessary for both the discursive and technical facets of their work. Felicity Scott (2016) critically analysed the role of architects and planners in the International Architecture Foundation's competition to design a "new community for 3,500 people"⁴⁷ in Manila (Philippines) as part of a World Bank and UN Environment Programme development in 1976. Since the brief and conditions were set before architects

⁴⁷ Note the political use of the word "community" here.

were involved, participation in the competition meant that architects – whether knowingly or unwittingly – belonged to a political apparatus and assumed the official agenda as theirs. Behind the rhetoric of humanitarian help and addressing problems of minimum living conditions, far from “seeking to empower squatters” architects “offered a smiling face” to the military government’s agenda of displacing the poor and creating a framework for multinational corporations and local elites to operate in an urban setting.

Since power will always exist “as a feature of social and political life”, the question is whether it is a form of domination by elites or an “emancipatory institutional form” (Bookchin, 2015, pp.143–144). It is then important, to ask who exercises that power and how, whether the structure of power is centralised or decentralised, whether decisions are imposed or consensual between different stakeholders. In this regard, Delgado (2015, p.64) argues that the mechanisms of mediation by local government are not only a way for the “dominant class” to hide contradictions that keep them in power while convincing the “dominated class” of the neutrality of the political system and in supporting it. To Delgado, the “dominated” not only accept contradictions but also actively participate in their own domination (Figure III-5). Arguably, this also applies to neoliberal policies and private-led forms of citizen engagement. Delgado’s argument suggests the need for citizen engagement to be either community led or led by external professional teams, which are publicly funded but autonomous, enabling a critical approach to power asymmetries.



Figure III-5. French student poster presented by Arnstein in discussing power relations in decision-making. "I participate, you participate, s/he participates, we participate, you participate, they profit". Source: Arnstein, 1969.

Awareness of power-related issues and engaging in a project beyond its design and build results in the need for community architects to develop bespoke tools. Some of these are discussed in the Toolkit in Chapter M.Process Management and S.Stakeholders (Figure III-6 to Figure III-10).

S12 ENGAGEMENT MATRIX

The engagement matrix assesses the skills and resources that a community has available to address the project and the project's objectives. It is a tool for assessing the community's capacity to address the project's objectives. It is a tool for assessing the community's capacity to address the project's objectives. It is a tool for assessing the community's capacity to address the project's objectives.

Community evaluation also should be included in the planning process. It is a tool for assessing the community's capacity to address the project's objectives. It is a tool for assessing the community's capacity to address the project's objectives. It is a tool for assessing the community's capacity to address the project's objectives.

S13 SOCIOGRAM

The sociogram is a tool for identifying existing stakeholders as well as those who should be incorporated to the project. It is a tool for identifying existing stakeholders as well as those who should be incorporated to the project. It is a tool for identifying existing stakeholders as well as those who should be incorporated to the project.

Figure III-6. Tools "S12 Engagement Matrix" and "S13 Sociogram" as presented in the Toolkit, with the aim of identifying existing stakeholders as well as those who should be incorporated to the project.

M22

CORE GROUP DIAGRAM

The organisational diagram defines the core group of the project in terms of decision-making and management functions in relation to other stakeholders. Highly variable depending on who forms the core group and the scope of the project, it typically includes the different kinds of expertise required to develop the project: technical teams (architecture and planning, financial, legal, mediation, etc) and promoters and/or procurement agencies (the local authority team). The functioning of these teams is framed by the nature of the procurement agency and the roles of different stakeholders, ranging from a local government department in public-led projects [4], self-managed groups [5] to a heterogeneous assembly with working groups in the case of community-led projects such as cooperative housing projects [4].

As the example of the La Borda housing cooperative evidences [4], the organisational diagram is not fixed, but evolves as the project does, in terms of both growing and shrinking at different stages responding to changing procurement needs. In this regard, this diagram might be helpful for new teams joining the project, since it provides an overview of the current state of play as well as the historical evolution of the project.

To avoid manipulation of the process, in public-led projects the core group must operate autonomously and avoid being influenced by political agendas during the process. In other words, detaching the client (who pays) from users (who will benefit from the project). Otherwise, what takes place is a banalisation of collaborative projects, and they become a superficial operation in which political decisions taken beforehand are implemented with a false appearance of democratisation, undermining the whole process and producing a long-term effect of distrust towards collaborative procurement.

- a) Organisation chart for a community design centre. Source: Waters and Kivett (1987) p.39.
- b) URBACT Inagrua Bada. Organizational diagram of the teams working in the project and their agency in them. (Below, members' portraits grouped in teams. Source: This information is arranged freely according to them.
- c) URBACT Inagrua Bada. Organizational scheme development from 2012 to 2018, including phases of project approach, project development and materialisation. The number of involved members is represented with programs. Image courtesy of URBACT.

Further reading:
See bibliography at the end of this chapter.



Figure III-7. Tool "M22 Core Group Diagram" as presented in the Toolkit. Diagrams evidence the diversity of possibilities depending on the projects, as well as its potential variations in time.

M21

MAP OF STAKEHOLDERS ROLES

A stakeholders' roles map is a synthesis tool to clarify who should be involved, in which phases, and with what agency. This allows the extent of impact or influence of certain groups to be defined in decisions regarding the diagnosis, aims, or design. Although this crucial activity always takes place, sometimes it does not happen in an open manner.

To avoid political interference, collaborative design processes fostered by the local government should rely on external and autonomous teams. Thus, it is important to frame who is part of this abstract concept of 'society' as users and where the boundaries of the process are in terms of social influence. Typically, stakeholders are organised into three concentric groups: the core group (those directly involved in the management and organisation), those in contact with the project who take part sporadically in certain phases or activities, and users affected by the project. This basic diagram requires detail according to the social and geographic limits of the project, and appears very differently in projects on different scales.

To discuss stakeholder roles, it is necessary to identify the stakeholders in the first place (see the tool in the Stakeholders chapter). In this context, technical and professional responsibility should never be avoided, with a transparent process and clear frameworks to avoid frustrations and misunderstandings.

To be complete, an evaluation of stakeholders should include stakeholders who might oppose the project, aiming to understand their motivations and, ideally, find ways to make it attractive for them.

- a) URBACT Inagrua Bada. Stakeholders are labelled according to relevance for the project: central stakeholder group, indirect group, peripheral group, and others (etc). Each of these groups is given specific functions in the design and transformation process. Source: Stake map for the transformation of the Inagrua in Bada del Valles (URBACT) (2016). URBACT (Management). Report available at urbact.eu.
- b) Arqtec and ETQAB. Diagram of the stakeholders involved in the REC Strategic re-establishment in Las Planas, Guel' Cooper del Valles, 2014. The diagram indicates public administration and members of different nature: private stakeholders and sponsors, and academic institutions, relating them to specific phases of the project or roles. Image courtesy of Arqtec.

Further reading:
See bibliography at the end of this chapter.
URBACT. Managing and implementing local stakeholders in Organising Decision-Making for Implementation. Available online: www.urbact.eu/participatory-approach-implementation.

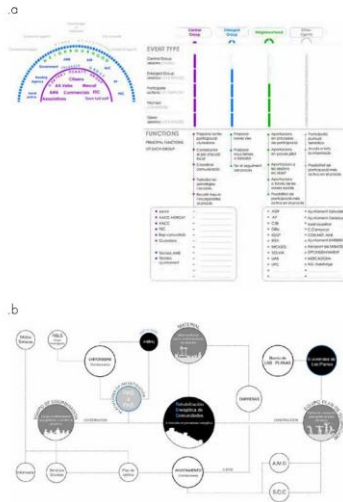


Figure III-8. Tool "M21 Map of Stakeholders Roles" as presented in the Toolkit. This tool aims to lay on the table a transparent discussion of stakeholders' agency during different phases of decision-

making. In the case of URBACT (.a; top right) it organises stakeholders in concentric circles according to their relation with the project, and attributes specific roles to each of them.

M11

DEFINITION OF PHASES

A graphic description of the whole process allows different phases to be discussed chronologically, including partial goals, methods, eventual scenarios and the range of stakeholders operating in them. The strength of the diagram resides in its capacity for synthesis, which allows a clear overview. However, to avoid this approach becoming reductive, it is necessary to extend the information in the diagram in the form of complementary descriptions of each of the phases. To do so, the other tools discussed in this chapter may be of use.

A phases definition diagram is an important document for projects linked to the notion of planning – for “strategic” projects more than for “tactical” ones, following Michel de Certeau (1988). While strategic projects rely on long-term planning, tactical ones rely on fragmented, temporary actions in a continuous search for opportunities.

The phases definition diagram should be elaborated at the beginning of the process, allowing a strategic discussion from the early stages of the project, and it should be reviewed as the project evolves, new stakeholders are incorporated, or conditions change, particularly if the phases definition tool is applied before the data-gathering stage.

The four typical phases represented in this diagram include diagnosis and analysis, design and strategy, execution, and evaluation. However, each project requires the definition of a bespoke stage, depending on local circumstances and project aims, in which the definition of this diagram becomes a crucial design step.

a) | NUNDO. Accessibility plan for the historic centre of Guadalupe (Cáceres), 2017. NUNDO's diagram for the accessibility plan for the historic centre of Guadalupe (Cáceres) consists of four main steps: analysis and diagnosis, proposals, relations, and evaluation. Each of them defines phases, activities and the stakeholders involved. Notably, it identifies what sort of intermediary results are expected, and when, so that each step builds on the previous ones. It also includes several phases of revision of the previous results and the evaluation phase turns the process into a circular dynamic. Source: nundo.org

b) | Raons Públiques. Diagram of phases and activities in dynamization of public space for urban definition of Santa neighbourhoods railway coverage. The process is divided into three phases: information, analysis, and return and closing. Note the dotted lines, which represent the opening and closing phases in terms of holding the discussion or aiming for a consensus. Activities are organised in linked themes and aim at specific outcomes. Source: raonspublicques.org

Further reading:
See bibliography at the end of the essay of this chapter.

Figure III-9. Tool "M11 Definition of Phases" as presented in the Toolkit. The tool is exemplified with the diagrams of NUNDO (.a) and raons Públiques (.b) in respective projects of urban transformation.

engaged are members of the cooperative or future dwellers) or the school playgrounds developed by Equal Saree in Co-educative Playgrounds (W16), in which the limits were defined by the educational community consisting of teachers, students, families and non-teaching staff from five schools, which developed each project autonomously.

Second, open-scale projects try to include the maximum number of voices and cover a large geographic area; this is a scale that involves planning and where representation plays a fundamental role. In this regard, Paisaje Transversal has developed a methodology of “urban integral planning”, which goes far beyond the typical consultation processes and makes citizens an active part in the process of large-scale projects. Interestingly, their tool InPar (Participatory Indicators)⁴⁸ allows technical indicators to be cross-referenced with citizen perceptions, making decisions more transparent.⁴⁹ Aiming for replicability and a wider impact on planning policies, they have published essays and toolkits (Paisaje Transversal, 2018a; Acero Caballero et al., 2019).

An interesting example of non-binding consultation at a regional level is the management of the Basque Observatory of Housing in the north of Spain, with a population of over two million. For the 2010 Housing Master Plan a digital platform was set up for citizens to offer opinions (almost 16.000 participants) and make specific suggestions that were responded by the organisation.⁵⁰

⁴⁸ “[InPar] Herramienta para la auditoría social de la sostenibilidad urbana”. More information at www.paisajetransversal.org/2016/02/inpar-herramienta-para-la-auditoria-social-de-la-sostenibilidad-urbana-planur-e. Accessed on 01.03.2022.

⁴⁹ Projects can be seen at www.paisajetransversal.com. Accessed on 01.03.2022.

⁵⁰ Presented by Mario José Yoldi Domínguez at the 2019 Forum on the Housing and Renovation of Barcelona, 19 – 21 March 2019. Out of the 45 proposals received, 30 were incorporated into the Plan, eight were already being considered, and seven were out of the scope of the competencies of the organisation. A report was finally submitted justifying the decisions

These projects are evidence that large-scale projects can successfully engage with citizen at different scales and involve different levels of decision while the project takes form, from general guidelines and prioritisation of strategies to the definition of particular interventions and definition of spaces.

Third, directed-scale developments is probably the most complex one, since it requires an artificial definition of boundaries. It typically refers to public space, parks or facilities whose impact may extend beyond their current users or direct neighbours. However, a call for engagement on a wide geographic scale might be an unnecessary waste of resources. Thus, the core management team (Figure III-7) needs to find a balance between representativity and operativity in defining the boundaries of social engagement (Figure III-8).

To balance representativity and operativity, Equal Saree developed a remarkable dual strategy for the refurbishment of the Baró Square in Santa Coloma de Gramenet (W21). First, the process included workshop sessions with users of the square, advertised locally. Secondly, to engage with the target group as defined by the municipality commission – children aged 6–12 – a second phase included the engagement with a nearby primary school, Torre Balldovina.

Setting boundaries of social engagement in iconic or singular projects may become especially problematic. The design of Moviment Obrer Square by Straddle3 (W20) emerged from a need identified in the municipal Pla de Barris (Neighbourhood Plan) and aimed to transform a recently built underused space into a skatepark. The process included a participatory methods in diagnosis and co-design phases to include associations and users at a neighbourhood scale. Attention was paid to understanding different user profiles, mostly families and

taken and indicating the municipality's capacity and inclination to address specific demands and the impact of suggestions over time. For more information visit www.euskadi.eus/observatoriovivienda. Accessed on 01.04.2019.

amateurs, including the skateboarding collective La Marina Patina (La Marina Skating). However, at the end of the process, a group of "advanced" young skateboarders from other areas of the city turned up, claiming they had been excluded from the process, given that the advertisement campaign had been limited to the neighbourhood. A session was organised to offer explanations by the design team, including both architects – David Juarez from Straddle3 – and Sergi Arenas, a renowned skatepark designer. Despite the fact that the meeting convinced the critical audience about the appropriateness of the methods employed, this event raised a major question about who to engage with and how to reach out to them. While emphasising the positive impact of engaging with users with different interests and needs, Juarez acknowledges that the presence of advanced skateboarders in the co-design workshops would have made the process more complex, since other users' needs (less experienced skateboarders, families, children) would potentially have been overridden.⁵¹ This shows that knowledge asymmetries and power relations can also occur among participant groups and that there is a need to include this possibility in the design of the process. In case of disrespectful or dominant attitudes, a strategy can be organising workshops addressed to specific participant profiles.

What lies at the heart of these discussions are issues of stakeholder legitimacy and representativity in decision-making that intersect with issues relating to power. These processes are highly dependent on municipal governments predisposition– the relinquishing of power by those who currently hold it – and of communities' commitment – a participative political culture and dedication. In other words, they rely on effective protocols for decision-making that are inclusive and transparent, and on mutual trust between stakeholders.

⁵¹ David Juared, architect of Straddle3, was interviewed by the author as part of the research methods explained in Chapter II.

The method becomes paramount for the articulation of practices with mutual benefits.

While technical and administrative staff are paid for their time, people's involvement is commonly on a voluntary and unpaid basis.⁵² Direct political participation may be very time-consuming, emotionally exhausting, and sometimes not very rewarding, and for some members of society it might be a difficult commitment or not possible.⁵³ Additionally, often the less privileged tend to engage less. Thus, creating the economic conditions for political participation is necessary.

Secondly, there is a need for education in participatory culture, which as a form of practice can be achieved through direct experience. This applies to all the different stakeholders, including decision-makers from the local government, independent practitioners and users. As the anarchist architect and writer Colin Ward (1976, p.119) put it: "education for participation in planning is not education about aesthetics, or about cost-benefit or central place theory, it is education about power". In this, architects play a crucial role as mediators – not necessarily equidistant between stakeholders.

⁵² As an anecdote, I attended some meetings in Taula d'Habitatge (Housing Board) of the Ciutat Vella district as Arquitectos de Cabecera representative in 2019, thus during this research. I noted a clear age pattern in the twenty people attending those meetings: attendees from architects' collectives, in their 30s; administrative staff from the municipality, in their 40s and 50s; and neighbours associations representatives, over 65.

⁵³ Administrative bodies know well that the excessive prolongation of urban transformation ends up exhausting any organised social opposition.

ON PROFESSIONAL AGENCY:

KNOWLEDGE ASYMMETRIES AND PROFESSIONAL RESPONSIBILITIES

“Architecture is too important to be left to architects. Nevertheless, the world cannot do without architecture”.

— Giancarlo de Carlo, 1969, p.13.

During the design stage discussions with municipal planners and future residents of the Quinta da Malagueira housing development (Evora, 1973-77)⁵⁴, Alvaro Siza was asked to become a mere executor with no critical input. His response was forceful: “The architect’s silence or demission [are] unacceptable. That is, a specific competence cannot be eclipsed by the collective whole, since it constitutes an irreplaceable presence. The set of professional skills, with all the knowledge it entails, is a capital to which one cannot renounce” (Fleck and Pfeifer, 2013, pp.145–170). However, far from presenting himself as an autonomous architect, Siza embraced the socially engaged principles of the Serviço de Apoio Ambulatório Local programme (SAAL, Local Ambulatory Support Service) in the organisation of regular neighbourhood meetings, described by him as exhausting but crucial. In addition, his response to the requirement to design 1,200 housing units included a system of variations that derived from consensus with residents, while at the same time allowing an interpretation of his designs to address the specificities of each house (Figure III-12). The design strategy made Siza question the very notion of authorship: “Who is the author? Is it me, who designed the initial houses, is it the researcher

⁵⁴ Quinta da Malagueira was an urban development of 1.200 housing units that mixed cooperative ownership and social housing and derived from a collaboration between the municipality and diverse housing cooperatives under the Serviço de Apoio Ambulatório Local (SAAL, Local Ambulatory Support Service) programme, in Portugal (1974–75), which aimed to actively include future dwellers in decision-making and in some cases in the construction phase.

who developed the grammar, or is it the designer who used the grammar to draw the house?” (Fleck and Pfeifer, 2013, pp.145–170).

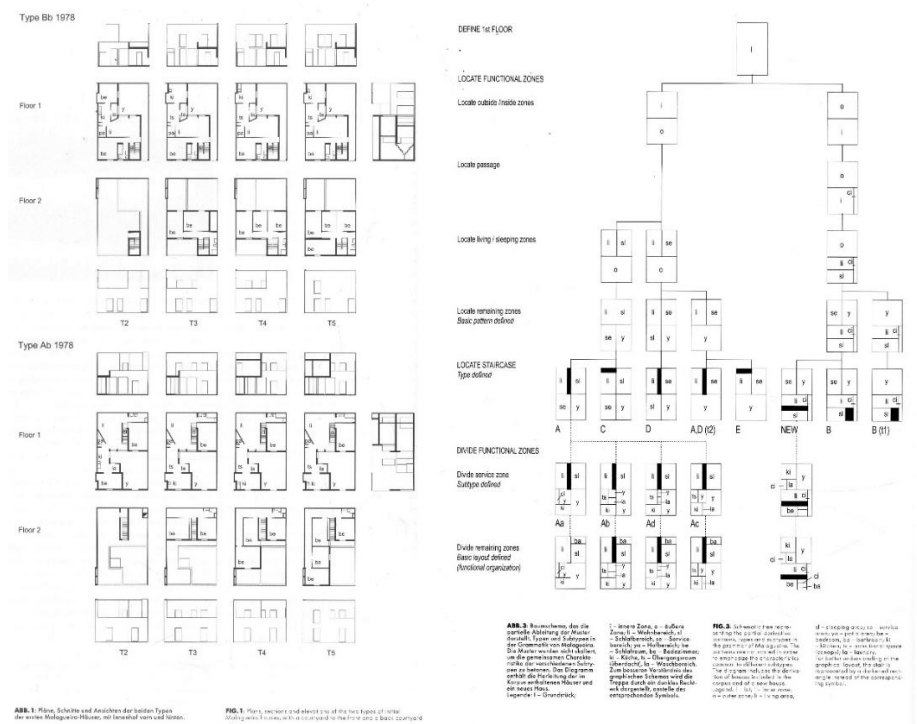


Figure III-12. Alvaro Siza, *Quinta da Malagueira* housing development (Evora, 1973-77). Left: housing types. Right: flow chart of design decisions that confirmed the rules and variations of the project grammar. Source: (Fleck and Pfeifer, 2013, p.214,218).

While the contribution made by architects derives from expertise, users are knowledgeable about everyday urban practices informed by their daily experience. What is relevant is how knowledge asymmetries and expertise can be articulated during the design process in a way that allows a better fulfilment of requirements and does not separate decisions on structural matters addressed by professionals, from more superficial ones addressed by users. More

importantly, how can this process guarantee a better design as defined by its response to social needs and further use and appropriation?

There are several positions between the technician who denies his/her professional expertise and the architect who claims total autonomy. Three complementary categories are suggested in the Toolkit, as summarised below. These can be combined in the same project, with conversations typically taking place in co-design workshops (tool D11).

The first of these is co-design by bespoke consensus: that is, both users and designers agree on a specific design. Users can contribute in many ways, from working on general guidelines to providing direct input on forms or materials, which some architects consider intrusive and others welcome.

An example of direct inputs is Lacol's la Borda cooperative housing (2014–18, Barcelona), where several co-design workshops, held throughout the design process, enabled a conversation between designers and users that enabled agreement on issues such as the amount and use of shared space or the layout of flats, which included different options of positioning the kitchen to accommodate different user preferences.

On general guidelines agreements, Susanne Hofmann (2014) developed a method of co-design based on workshops that discuss an abstract idea of “the atmosphere”, which forms the consensus of a joint narrative and imaginary for the project. These guidelines are then translated by architects into specific architectural designs.

An interesting example of consensus, which not only includes design decisions but also strategic ones, is Alvaro Siza's Punt en Komma buildings (the Hague, 1980s). Nelson Mota (2014) reports how Siza insisted on a consensual design for two different communities – Dutch and non-Dutch – since culture-

specific design solutions would have increased existing ethnic tensions. This process was developed through workshops with both groups, which decisively informed the result as seen on the evolution of the housing layout (Figure III-13).

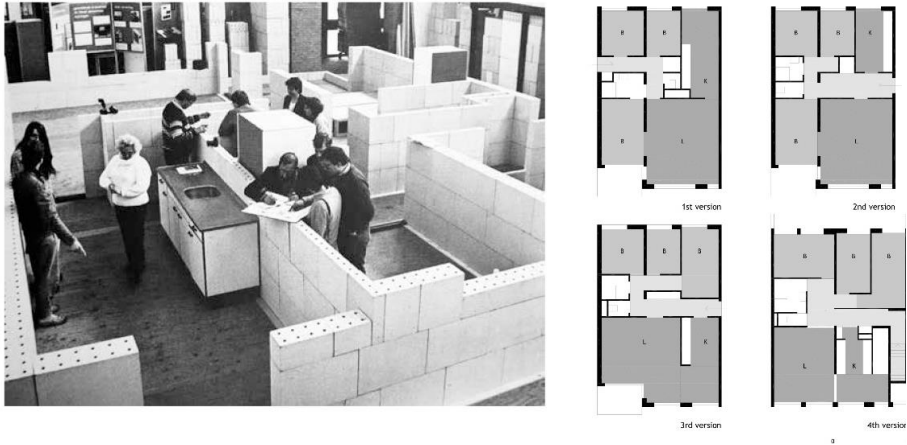


Figure III-13. Alvaro Siza's Punt en Komma buildings (the Hague, 1980s). Left: Siza with future residents (centre of the image) in a workshop that included a 1:1 mock-up. Right: the evolution of the plan through the process, as informed by the workshops. Source: Mota, N. 2014, pp. 384-385.

The second category is that of typological variations, typically applicable to housing projects and consisting of finding consensus on several options, which can then be chosen by residents (D24). This can take place during the design phase (most commonly) or can envisage typological changes during post-occupancy. Examples are Giancarlo de Carlo's Villaggio Matteotti (1969–74), with fifteen consensually developed dwelling typologies, Alvaro Siza's Quinta do Malagueira (1973-77), with a system of repetition and variation, or la Borda by Lacol (2014–18, W02, Figure III-14).

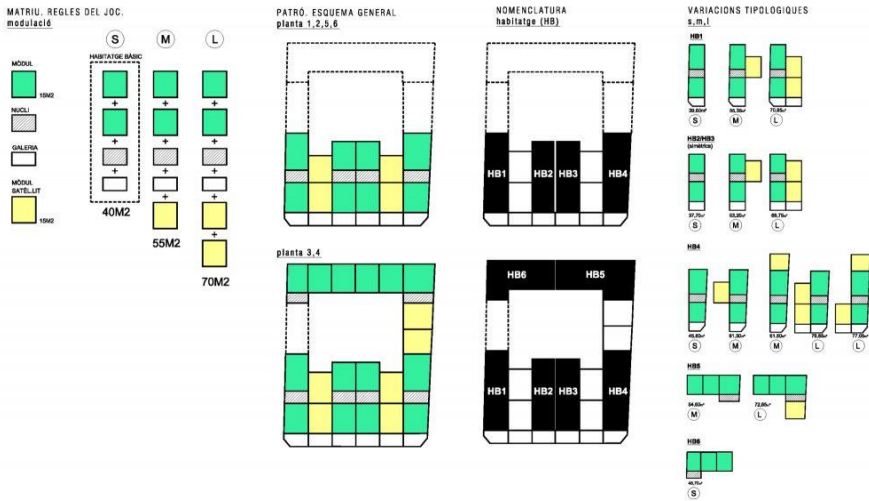


Figure III-14. La Borda cooperative housing, Lacol, 2014-18. Diagram showing typological variations defining flats of three different sizes (S,M,L) which can be combined differently to respond to different household sizes. Given the single property of the building of the cooperative, the yellow rooms can serve any of the adjacent flats with use changes over time. Source: courtesy of Lacol.

The third category is adaptable systems, in which the overall rules of construction are defined by the architect, while users take the lead in its customisation. John Habraken’s Support and Infill method (SAR, Stichting Architecten Research) is the clearest example, and produced projects such as Frei Otto’s Ökohaus in Berlin (1983-89) and Yositika Utida’s Next 21 Housing in Osaka (1984). The Segal Method (developed by Walter Segal) is another example, that was tested in Lewisham, south-east London, during the 1970s (Figure III-15), and Christopher Alexander’s Mexicali housing (1985). Helmut Schulitz’s TEST system (1970s) is a relevant example of the overlapping roles of users and designers throughout the design and execution phases, in which systemic variations are established at the beginning of the process and design decisions about specific steps are taken either by architects or users in predefined designated roles (Figure III-16).



Figure III-15. Walter Segal developed a construction method based on easily available timber frame construction that allowed residents to design their own houses. Segal was in charge of supervising the works. This was famously put in practice in Lewisham, London, during the 1970s. There are over 200 houses built using the Segal method in the UK. Source: ribaj.com, M. Charles, J. Broome (pictures) and Broome, 1986 (sketch).

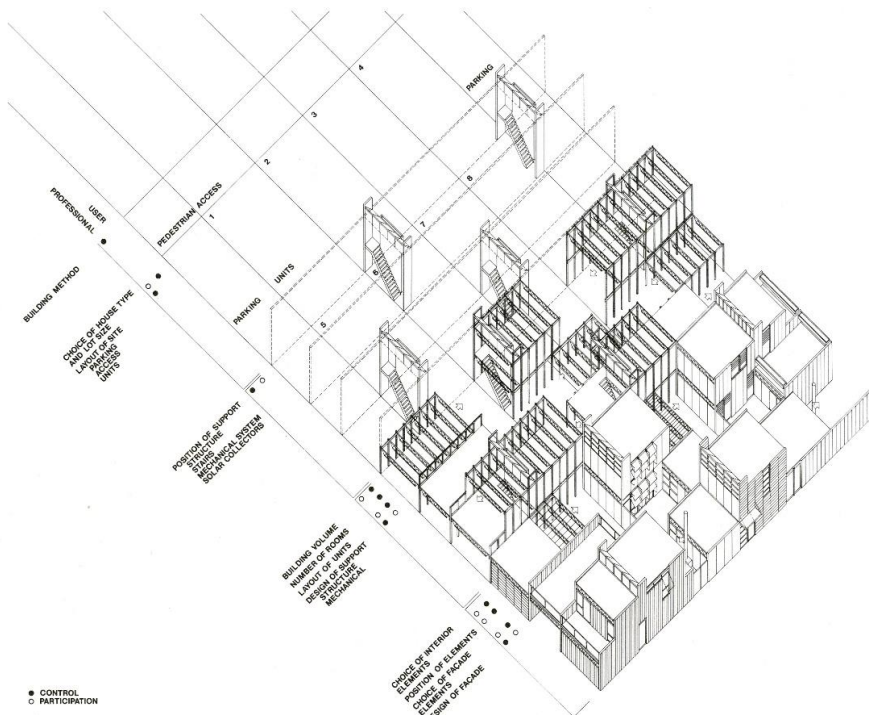


Figure III-16. Helmut Schulitz, TEST system, 1970s. Stakeholders, namely users and professionals, are given specific roles in design decisions, classified as "control", "participation" or blank (in the left

axis), shifting the leadership of the process at different moments. While some actions rely on one or another, most of them depend on negotiation. Source: Hatch, C. R. (1984) The Scope of Social Architecture. New York: Van Nostrand Reinhold, pp.78-89.

Design decisions, whether consensual or not, include a mix of technical and aesthetic choices, the former including notions of typology, standards, legislation and materiality, and the latter guided by identity and cultural preferences.

In regard to technical decisions, knowledge asymmetries between professionals and non-professionals are frequent. The situation becomes more complex when there is active civic opposition, explicit mistrust between stakeholders or an ineffective communication campaign. As an example, the recent Eixample Superblock⁵⁵ implementation (Bohigas et al., 2021): the municipality is transforming Cerdàs blocks into Superblocks and “green axes” throughout the city, which are increasingly being perceived as a positive qualitative transformation by residents, although in some cases they have had the effect of gentrifying the area. Despite the original controversy,⁵⁶ achieving the environmental benefits announced by municipal planning staff and corroborated by scientific evidence after its realisation shows the relevance of

⁵⁵ Superblock is a urban redefinition strategy aiming to unify nine Eixample blocks (a 3x3 grid) into a bigger urban unit which keeps vehicle traffic to the perimeter and prioritises pedestrianised mobility and activities in the inner streets. This plan has been designed since the early 2000s by the Agència d'Ecologia Urbana ('Urban Ecology Agency'), directed by Salvador Rueda, showing once more the flexibility and transformative capacity of a masterplan designed 150 years ago. See www.bcneologia.net/es

⁵⁶ As part of the municipal government agenda, the first pilot project for the Superblock took place in the Poblenou neighbourhood in September 2016 using a strategy of reversible tactical urbanism developed by students of architecture of five schools of architecture gathered around the Confederation of Architecture Design Studios (Confederació de Tallers de Projectes d'Arquitectura, CTPA). The opening weekend included public debates and was followed by strong political and neighbourhood opposition, but also some supporting groups. Design studios of schools and postgrad schools of architecture in Barcelona (ETSAB, ETSABV, ETSALS, UIC, IAAC)

professional expertise and how a municipal imposition had a long-term positive impact despite initial opposition to it. The key question is thus: how is common good framed?

The second group of decisions, aesthetics, are often very sensitive since they not only rely on user preferences but also cultural values and the semiotics of form and materials having an impact on identity, history and memory. The key question of the aesthetics that best communicate the values that a building is to transmit has been long been debated. Linked to it is that of whether this decision should be taken by “experts”, by decision-makers and politicians, or collectively. While architects' expertise is undeniable – aesthetics cannot be detached from programmatic, constructive and typological questions or from a knowledge of urban and building history – there is also a need for users to accept their city's architecture.⁵⁷

As mentioned above, for de Carlo (2009 [1969]), it is in the architect's best interest to include residents in decision-making in order to guarantee that they will be more likely to accept and appropriate the buildings. For example, even though Hassan Fathy designed the social housing units of new Gournah neighbourhood (Luxos, Egypt, 1946) with vernacular language and traditional materials to permit residents to complete them themselves, the buildings were not well received by those who moved in; vernacular aesthetics perceived as an undesirable past resulted in the refurbishment of the units with modern materials and aesthetics (Montaner, 2015, p.78). Aligned with this is Stewart Brand's analysis of how users customise and adapt buildings in the long term (Brand, 1994).

⁵⁷ There is plenty of examples in which cultural assimilation processes did not happen in the short term but after years, such as Antoni Gaudi's La Pedrera (1906-1920), originally repudiated and nowadays a symbol of Barcelona.

Official buildings translate this discussion into a political sphere. Jean Nouvel argues in relation to the Judicial Centre of Nantes (1993–2000) that “power is represented by official architecture. A judicial city is a representation of the power of justice. What is at stake here is the image of justice in terms of its symbols and character. The image of the public buildings is a heritage of signs that cannot be changed without some risk” (Márquez Cecilia and Levene, 2002). In Nouvel’s opinion, while the programme, uses and materials are part of the project which should be democratically negotiated (and thus turning architecture into a depending discipline), the cultural definition of the built environment – that is, the aesthetic dimension – is to exclusively the architect’s task (Zaera Polo, 1998, p.11).

As a cross-cutting issue, in urban transformation projects there is a need for professionals to use plain language and transparent communication. Additionally, different parties should have speakers who are equally qualified to represent different stakeholders; it is often the case that both local authority and private stakeholders have technical and professional staff in their teams, which does not always happen in social movements. Thus, the presence of autonomous technical team is crucial. Otherwise, the vulnerability of citizens is like someone attending a trial without a lawyer, unaware of protocols, regulations, and the language used to communicate. However, to avoid relying on volunteers – as the case of Forat de la Vergonya – these should be paid.

There are many precedents for organisations of architects which have offered assistance to local communities or users who otherwise could not afford it. Indeed, "The Architect as Enabler" was the topic suggested by the president of the International Union of Architects (IUA), John Turner, for their 1984 International Competition. Turner defended the need for a professional profile such as this in an post-evaluation text (Turner, 1985). In Barcelona, beyond the

abovementioned examples, Arquitectos de Cabecera recently set a *Oficina de Suport Tècnic a la Rehabilitació* (OSTRAC, Office for Technical Support to Housing Energy Refurbishment). Other international examples include the Community Technical Aid Centres (CTACs) in the UK (1978–85), the Community Design Centers in the US (1960-), Uruguay’s Instituto de Asistencia Técnica (Institutes of Technical Aid, since the 1970s), and the Brazilian Usinas (since 1990). On a domestic scale, the Argentinian architect Rodolfo Livingston developed a remarkable method for evolving the “family architect” and “community architect” (Livingston, 1992; 2002).

But the often-repeated idea of architects empowering local communities should be questioned. Since empowerment entails a questioning of power structures affecting decision-making, any kind of empowerment by invitation will inevitably fail to question the mechanisms that sustain those in power: empowerment can only exist as self-empowerment. Thus “architects’ empowering” entails a naïve and overrated concept of what architecture can do.

THE IMPORTANCE OF THE METHOD

Arnstein’s (1969) intermediate steps between institutional manipulation and citizen control causes constant friction and negotiation between different stakeholders regarding the several parameters discussed above. This also applies to community-led projects, where social groups might have different agendas and are made up of people with different needs and priorities. Citizen engagement in urban governance contains an inherent degree of conflict, since by definition the city is a place where different people with different agendas and preferences meet. While conflict is often perceived as negative, as preventing decision making and progress, its potential positive character has also been described in sociological terms (Simmel and Levine, 2015) and in forcing citizens to learn how to handle divergences and assume responsibilities at a city scale

(Sennett, 1970). It can also offer a driving force for change resulting from social and urban struggles, “the definition of urban meaning will be a process of conflict, domination, and resistance to domination, directly linked to the dynamics of social struggle and not to the reproductive spatial expression of a unified culture” (Castells, 1983, p.302).

In decision-making, consensus might not even be a desirable, since it may show a lack of a critical approach (Miessen, 2010). Fernando Cembranos and José Ángel Medina (2003) recognise disagreement as a characteristic of any group and conflict as essential for the evolution of the group, making it more intelligent by forcing it to develop and improve its structure and behaviour. The authors propose assemblies – in a range of sizes and framed by specific methods of decision-making – as a key action for the horizontal distribution of power and the inclusion of all voices in a direct democratic governance. Beyond what can be considered citizen rights, they argue that there are many pragmatic benefits: the great potential of collective creativity, multiple approaches to solution finding, the inclusion of many perspectives, and the possibility of facing more complex realities. Notably, the authors claim that “intelligent groups” are based not on the individual intelligence of members, but on the method employed to make decisions. However, they emphasise that the quality of conversation is influenced by well-informed and thorough attitude of participants. In addition, they describe how specific discussion methods are crucial to avoid the problem of polarising opinions and lacking coordination, which can be time consuming and ineffective.

PROCUREMENT MODELS

In terms of the briefs and clients that architects work with, there are three major categories, each entailing its own procurement mechanisms, decision-making

protocols and tools. Figure III-17 summarises the role of stakeholders in different project types, according to the three procurement mechanisms.

Public procurement is a process led by public institutions seeking to represent the interests of the majority, but which nevertheless follows political parties' agendas and priorities. For architects in Spain, this process entails participating in public – but not necessarily open – design competitions and following design guidelines set by the administration aiming a certain degree of standardisation of processes and outcomes. Secondly, in private development – mostly driven by profit or self-interest – architects achieve an agreement with the client about the expectations and design guidelines for the project.

In both public and private procurement there is often little overlap between different technical teams in consecutive procurement stages. Moreover, the roles of stakeholders are highly coincident. First, developers are also investors and adopt leadership roles throughout the process, although in the case of public administration this may be addressed through different departments. Secondly, architects' roles are most commonly limited to the design and build stages, and many strategic decisions with an impact on the design stages have already been taken. This process can take place directly through design briefs and instructions, or indirectly through standard design manuals (for example Ajuntament de Barcelona and Patronat Municipal de l'Habitatge de Barcelona, 2019; INCASOL Institut Català del Sòl, 2019). Finally, users most commonly participate in the process at the end of it, during post-occupancy, as passive receivers (as users or buyers) of architectural products.

The third category is community-led procurement. As opposed to a public and private reading of users as passive subjects, in self-managed procurement users' evidence an active involvement in the process of decision-making, bringing the benefits of engaging with early decision-making, adapting the

project to their needs and desires and, more importantly, assuming design and managerial risks in the project, which are typically avoided in both public and private procurement. It is not only the agency of the user that changes, but also the role of architects associated with them, which is no longer limited to the conventional design-and-execution phases but also includes diagnosis and post-occupancy, and potentially includes involvement in management as well.

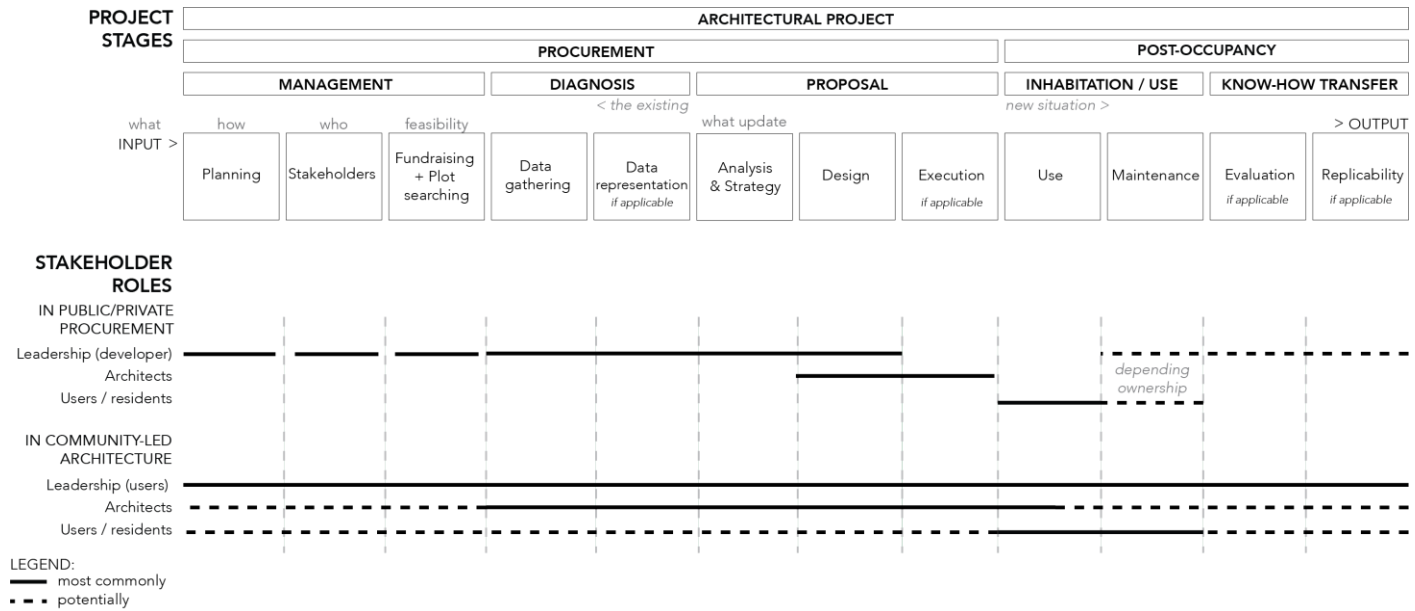


Figure III-17. A simplified version of the potential stages of the design process and stakeholder involvement in public/private procurement and community-led architecture. The columns differentiate the different moments in an architectural project, firstly by splitting it in two main phases: procurement and post-occupancy. Following this, the columns break down the process into different phases (management, diagnosis, proposal, inhabitation, and know-how transfer): each of them include sub-phases, most commonly but not necessarily consecutive. Rows of figures show stakeholder involvement (developer, architects, and users/residents) in these stages differentiating between public/private procurement and community led.

However, community-led procurement has traditionally been limited in scope and impact. Following Michel de Certeau's (2008) distinction between tactical and strategic projects,⁵⁸ community-led architecture is commonly associated with tactical projects with no guarantee of long-term stability derived from planning, and thus often produces projects with limited impact and outside the main political agendas. An example in Barcelona was the engaging initiative of *Buits Urbans amb Implicació Territorial i Social* (Pla BUIITS, Urban Voids with Social and Regional Commitment), developed by the Barcelona City Council in 2012 and 2015⁵⁹ to activate empty, unused publicly owned land through community-led projects that offer activities with public interest during a limited period of time (three to five years).⁶⁰ Although BUIITS Plan did not represent a structural change for the city, given its temporality, it was significant, since it evidenced the possibility of an effective (short-term) partnership between local communities and the municipality.

Aiming to scale up the model, in 2017 *Barcelona en Comú* implemented the Citizen Assets programme to consolidate and foster communitarian self-management, based on “the logic that what is public (municipal property) can become communal (citizen patrimony) through new forms of shared management and interaction”.⁶¹ This framework enabled in 2019 the leasing of

⁵⁸ To de Certeau, strategies depend on the deployment of vertical power in a controlled area; they are “a triumph of place over time” and tactics are temporary and calculated actions in a permanent search for opportunities; “on a clever utilization of time” (de Certeau, 1988).

⁵⁹ Two public competitions were organised in 2012 and 2015 in which associationist projects could apply to develop/activate empty plots of land.

⁶⁰ See <https://ajuntament.barcelona.cat/ecologiaurbana/ca/pla-buits>. Accessed on 01 November 2019. The map of plots of land and their uses can be visited at <https://ajuntament.barcelona.cat/ecologiaurbana/ca/pla-buits/cercar-per-mapa>. For a detailed analysis see (Magrinyà, 2015).

⁶¹ With the aim of implementing a social agenda, the selection criteria for the non-profit community-led initiatives that managed the 63 facilities, included neighbourhood bonds, social return, participatory management and social and environmental care (Ajuntament de Barcelona, 2017). Citizen Assets webpage:

several spaces in Can Batlló (W08) to the Association of the Self-Managed Communal and Neighbourhood Spaces of Can Batlló (Associació Espai Comunitari i Veïnal Autogestionat de Can Batlló) for 50 years.

The scalability of these initiatives from the leasing of empty plots of land to citizen patrimony – that is, from tactical to strategic projects – presented major challenges for all stakeholders. The long-term requirements of the agreement included the need to have a much better organised social community articulated around a legal framework (for example an association), and the management of greater resources. Secondly, in terms of management, it entailed a shift from delimited plots of land with clear boundaries, both physically and often socially, to larger situations such as Can Batlló where an open urban space (unfenced, unlike Pla de Buïts) is managed through a general assembly open to an entire neighbourhood.

The inclusion of larger communities in strategic projects is not restricted to Barcelona (with self-managed case studies in Can Batlló (W08), Warehouse 11 (W09), Coopolis Phase 0 (W10) and Arcadia School (W11)), but is also being implemented in other municipalities such as Santa Coloma de Gramenet (Baró Square (W21), Coeducative Playgrounds (W16)) and Sant Cugat del Vallès (Pas a Pas les Planes (W05), including the Community Energy Refurbishment (W06), (e)co Platform (W14), Pere Grau Space (W15), and the Ringo Rango Route (W22)). In addition, some projects were proposed by citizen initiatives and supported, to a greater or lesser degree, by the respective municipalities, such as cooperative housing (la Borda (W02), Cirerers (W03)) and public space refurbishment (Sk8+U (W18), la Santa (W19), Moviment Obrer Square (W20). Finally, other projects derived from private interest, like the Guimerà Senior co-

<https://ajuntament.barcelona.cat/participaciociudadana/en/citizen-assets>.
02.02.2020.

Accessed

housing (W04) and la Comunal (a private heritage building reconverted into a hub for cooperatives).

Moving from tactical to strategic projects scales up the design opportunities derived from working in more permanent, complex and larger interventions. This raises intersecting questions such as: how management during procurement affects the whole process? How are design questions formulated and by whom? Who sets design priorities and assumes responsibility for those decisions? How does long-term building management affect design decisions?

It is by grounding these discussions in architectural production that the Toolkit makes a methodological contribution, articulating issues of power and asymmetrical knowledge to enable collaborative discussions and instrumentalising disagreements in them.

IV.

THE TOOLKIT AS RESEARCH PROCESS

“A new way of doing [architecture] necessarily implies new procedures”
— Paisaje Transversal, 2018

KNOWLEDGE GAP

Community-led initiatives have been analysed from different entry points. Taking Till's (2007) classification of architectural research – processes, products and performance – ‘products’ is the most analysed one. Photographs and plans are presented as evidence of architectural production, while processes and performance are discussed in texts (in academic contexts) and detailed plans or photographs (in specialist publications). On the contrary, social sciences most commonly describes (but does not spatially represent) the process and performance but overlooks the product, exemplified by the perspective of political theory and a managerial approach (for example Ostrom, 1990; Harvey,

2013; Subirats and García Bernardos, 2015; Stavrides, 2016; De Angelis, 2017). Their methodological approach is based on descriptive and analytical textual discussion, which lacks architecture's spatial thinking as an analytical theme, cause and consequence of the social dimension (Lefebvre, 2013 [1974]), and commonly overlook the crucial role of design methods and their specific role in decision-making in "the production of space" (Lefebvre, 2013 [1974]). As distinct from other social practices, architecture's main exploratory tool is the project, at the same time analytical and prepositive, morphological and social.

In between both, there is a significant amount of literature on community-led urbanism, including *Tactical Urbanism* (Lydon and Garcia, 2015), *Spatial Agency* (Awan, Schneider and Till, 2011), *Handmade Urbanism* (Rosa and Weiland, 2013) and *Together!* (Kries et al., 2017). Additionally, many architects' collectives in Spain have published accounts of their methods and strategies: *Building Collectively* (Lacol, 2018), *Escuchar y transformar la ciudad* (Paisaje Transversal, 2018a), *El pati de l'escola en igualtat* (Saldaña et al., 2019), as well as practice reports of specific design processes. However, none of these presents a comprehensive breakdown of design methods between the identification of a problem and the actual performance of the transformed space.

To fill this gap, the Toolkit has been developed as a systematic analysis and cataloguing of collaborative design methods to understand how specific collaborative design methods produce distinctive outcomes at different procurement stages and the key decisions informing them.

The closest publication is the outstanding *Community Planning Handbook* (Wates, 2000), which specifically addresses issues of planning. Similar instrumental publications include the recent toolkit *Our City Plans: An Incremental and Participatory Toolbox for Urban Planning* (UNHabitat, 2021) or URBACT's

comprehensive online *Toolkit for Participatory Working*.⁶² These three publications are mostly targeting public organisations by only including administration-led projects and assuming political support for their implementation. The Toolkit developed in this thesis builds on the knowledge offered by these publications, but focuses on an analysis of practice methods and tools that specifically target architects rather than planners and does not assume favourable developing contexts or necessary political support. Additionally, it addresses a wider spectrum of project situations than is covered in the publications mentioned above, including different kinds of leadership (public, private or community led), size (from furniture to urban space – leaving aside planning, covered by other publications), motivations (from planned projects to guerrilla actions) and starting points (direct commission, the identification of a need, problem, or an opportunity).

As for uniqueness, beyond the theoretical instrumentalisation for this PhD (Toolkit specific aim T₁), the Toolkit is tested twice: to analyse practice through case studies (T₂) and to inform practice aiming knowledge transferability (T₃). Thus, while T₁ targets my research in terms of its applicability and T₂ addresses other potential researchers, T₃ is addressed to practising architects – independent practitioners, local authority technical staff, activists, etc. – as a tool that enables projective thinking.

CONTENT

For the sake of applicability, the Toolkit chapters and sections are structured according to procurement stages, since most architectural and urban projects follow a similar pattern (Figure IV-1). As discussed in Chapter III, this structure reveals the decision-making that takes place in architectural procurement,

⁶² Available online at: urbact.eu/toolbox-home. Accessed on 01.01.2022.

grounding citizen engagement in specific discussions about stakeholder roles, agency, and responsibility, and enabling the analysis of specific design tools and their impact on the project.

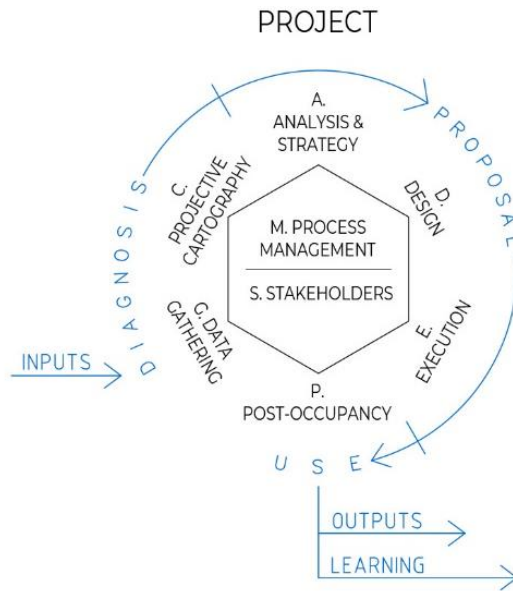


Figure IV-1. Typical stages in the procurement project. In the centre, the eight chapters of the Toolkit.

Rather than working with a small number of case studies analysed in depth, the Toolkit uses a complementary multiplicity, offering a panoramic overview of hundreds of projects emerging from the use of specific tools (Figure IV-2). The taxonomy and analysis of 118 collaborative design tools and strategies organised by the project stage allow an enquiry into how traditional architectural tools are being adapted to cope with new disciplinary needs – for example, the representation of the social dimension of architecture in architectural drawings

TOOLS INVENTORY

	<p>G. DATA GATHERING</p> <p>G1. ON-SITE DIAGNOSIS</p> <p>G11 Ethnographic observation</p> <p>G12 Group walk</p> <p>G13 On-site technical support office</p> <p>G2. PARTICIPANT DIAGNOSIS</p> <p>G21 Diagnostic workshops (I-II)</p> <p>G22 Meetings with stakeholders</p> <p>G23 Interview / survey</p> <p>C. PROJECTIVE CARTOGRAPHY</p> <p>C1. SPATIAL & MORPHOLOGICAL</p> <p>C11 Drawing the domestic</p> <p>C12 Picturing the domestic</p> <p>C13 Building as socio-spatial ecosystem</p> <p>C14 Facade as mediator</p> <p>C15 Urban void</p> <p>C16 Neighbourhood</p> <p>C17 Urban landmarks</p> <p>C18 Systemic urban elements</p> <p>C2. SOCIAL DIAGRAMS</p> <p>C21 User portraits</p> <p>C22 Routines & habits</p> <p>C23 Users' needs (I): individual</p> <p>C24 Users' needs (II): collective</p> <p>C25 Morphology to patterns of behaviour</p> <p>C26 Rituals & social activities</p> <p>C27 Diagrams of relational activities</p> <p>C3. THE INTANGIBLE</p> <p>C31 Subjective perception maps</p> <p>C32 Collective perception</p> <p>C33 Proximity or isolation</p> <p>C34 Movement</p> <p>C35 Memory</p> <p>C36 The uncanny</p> <p>C37 Invisible borders</p> <p>C38 Temporalised space</p> <p>C39 Control</p> <p>C40 Conflict (I): maps</p> <p>C41 Conflict (II): events</p> <p>C42 Conflict (III): effects</p> <p>A. ANALYSIS & STRATEGY</p> <p>A1. SYNTHESIS</p> <p>A11 The (yellow) manifesto</p> <p>A12 Mind map</p> <p>A13 Design limits' map</p> <p>A2. RESOURCES</p> <p>A21 Financial analysis & co-finance strategies</p> <p>A22 Available resources (I): inventory</p> <p>A23 Available resources (II): "harvest map"</p> <p>A3. STRATEGY</p> <p>A31 Strategic action plan</p> <p>A32 Actions & tools breakdown</p> <p>A33 Viability map</p> <p>A34 Consequences map</p> <p>A4. EVALUATION INDICATORS</p> <p>A41 Technical indicators</p> <p>A42 Perceptual indicators</p> <p>A43 Typological indicators</p> <p>A44 Cross-qualitative & quantitative data</p>	<p>D. DESIGN</p> <p>D1. CO-DESIGN</p> <p>D11 Co-design workshops (I-IV)</p> <p>D12 Proposing an alternative</p> <p>D2. INDETERMINACY</p> <p>D21 Enabling: user appropriation</p> <p>D22 Enabling: user manipulation</p> <p>D23 Enabling: adaptable system</p> <p>D24 Typological variations</p> <p>D25 Multiple scenarios</p> <p>D3. LIMITED RESOURCES</p> <p>D31 Intermediary situations: "the meanwhile"</p> <p>D32 Leveraging material scarcity</p> <p>D33 Designing for low-risk construction</p> <p>D34 Split large interventions</p> <p>D35 Nomadic facilities</p> <p>D4. DODGING REGULATIONS</p> <p>D41 Legislative blind spot</p> <p>D42 Camouflage</p> <p>D43 Declaring a Temporary Autonomous Zone</p> <p>D5. RECLAIM</p> <p>D51 Reclaiming empty plots</p> <p>D52 Filling in the gap</p> <p>D53 Regaining infrastructure</p> <p>E. EXECUTION</p> <p>E1. NO-CONSTRUCTION</p> <p>E11 Do not do (I): maintain</p> <p>E12 Do not do (II): connect</p> <p>E13 Reprogramming time in space</p> <p>E14 Relocation</p> <p>E15 Undoing</p> <p>E2. REUSING</p> <p>E21 Borrow - barter</p> <p>E22 Recycling & reclaiming components</p> <p>E23 Dismantling & reassembling buildings</p> <p>E24 Parasite</p> <p>E3. DIY-DIT CO-CONSTRUCTION</p> <p>E31 Technical specifications</p> <p>E32 User to execute</p> <p>E33 User to complete</p> <p>E34 User to expand</p> <p>E35 Collective assisted DIY-DIT</p> <p>E4. CATALYSTS</p> <p>E41 Generative actions</p> <p>E42 Tactical on-site prototypes</p> <p>E43 Do it anyway</p> <p>P. POST-OCCUPANCY</p> <p>P1. ASSESSMENT & EVALUATION</p> <p>P11 Process overview</p> <p>P12 External evaluation: stakeholder review</p> <p>P13 Internal evaluation: tools & methods (I-IV)</p> <p>P14 Evaluation indicators review</p> <p>P2. POST-OCCUPANCY TECHNICAL SUPPORT</p> <p>P21 Post-occupancy technical support</p> <p>P22 Building monitoring</p> <p>P3. KNOWLEDGE TRANSFERABILITY</p> <p>P31 Manuals & toolkits (I-II)</p> <p>P32 Plans sets</p> <p>P33 Process reports</p> <p>P34 Online resources</p>
<p>M. PROCESS MANAGEMENT</p> <p>M1. PLANNING</p> <p>M11 Definition of phases</p> <p>M12 Anticipated timescale</p> <p>M2. DECISION-MAKING</p> <p>M21 Map of stakeholder roles</p> <p>M22 Core group diagram</p> <p>M23 Decision-making scheme</p> <p>M3. STAKEHOLDER ENGAGEMENT</p> <p>M31 Co-organise / develop with</p> <p>M32 Involving decisive partners</p> <p>M33 Discussion workshops (I-II)</p> <p>S. STAKEHOLDERS</p> <p>S1. MAPPING</p> <p>S11 Identify stakeholders</p> <p>S12 Engagement matrix</p> <p>S13 Sociogram</p> <p>S14 Powergram</p> <p>S2. REACHING BY SEDUCTION</p> <p>S21 Direct invitation</p> <p>S22 Indirect contact</p> <p>S23 Make it fun</p> <p>S24 Food as social ritual</p> <p>S25 Provide a platform for expression</p> <p>S3. REACHING BY PROVOCATION</p> <p>S31 Artefacts invade public space</p> <p>S32 Spatial alteration</p> <p>S33 Confrontation</p> <p>S4. REACHING VIA MAKING VISIBLE</p> <p>S41 Collaboration with external events</p> <p>S42 Printed media</p> <p>S43 Digital platforms</p> <p>S44 Billboard hacking</p> <p>S45 Public exhibition</p> <p>S46 Interactive map</p> <p>S47 Video / documentary</p>		

Figure IV-3. Toolkit Table of Contents, chapters and sections responding to procurement stages. Alphanumeric codes linked to titles allow the easy identification of chapters, sections and tools. Some tools in the Toolkit could belong to different chapters, since the boundaries of different stages are often blurred.

A brief summary of the Toolkit chapters and sections follows.

M. Process Management

Although not all projects undergo an in-depth planning process, management is needed at times when there is any kind of resource involved. This chapter aims to enable discussions about process management in planning (section M1), decision-making (M2) and stakeholder engagement (M3), all of which are framed by the discussion presented in Chapter III about process leadership, knowledge and asymmetries of power. At a higher level, it raises the question of who sets the rules of the game: who decides who sits at the table (and who is left out), which topics will be discussed or which not, and which phases the process will include. It also directly tackle questions of stakeholder's roles and agency: whose responsibility it is to take decisions, who takes them on behalf of, and for the benefit of, whom, and who feels legitimised to take them.

S. Stakeholders

The tools in this chapter can be classified in two groups. First, tools that map the stakeholders involved in the process (S1). Since citizen engagement cannot be forced, the only strategy to increase involvement is to generate trust and confidence in both the project and its benefits. For this reason, the second group of tools is dedicated to reaching new stakeholders. These tools are classified as reaching by seduction (S2), reaching by provocation (S3), and reaching via making visible or broadcasting certain activities (S4). Tools in this chapter can be applied to any phase of the procurement process that includes citizen engagement.

G. Data gathering

During data-gathering, information to identify needs, problems and opportunities is collected and conditions the understanding of the design problem. For this reason, the selection of tools and participants is crucial. Tools focus on methods that include users: on-site diagnosis (G1) and participant diagnosis (G2), highlighting the everyday as a crucial project dimension.

C. Projective Cartography

Projective cartography is defined as the depiction of gathered data in architectural drawings. How information is displayed plays a crucial role in decision-making (Tufte, 1997). As opposed to the map that offers a false ‘universal truth’, cartography operates from a multiplicity of readings by considering the various subjectivities that inhabit the city and the specificities derived from gender, age, socio-economic background, political preferences, etc. The Cartography chapter interrelates the physical morphology of the city (C1) with the social relations that space enables or prevents (C2) and the users’ perception of spaces by revealing the intangible conditions of the city (C3).

A. Analysis & Strategy

The Analysis and Strategy stage entails the critical evaluation of gathered data to define the overall strategy and guidelines. Connecting diagnosis and design, this is a crucial moment in which not only the aims and programmes are discussed, but also priorities, evaluation indicators and direct or indirect beneficiaries, closely linked to the Chapter M. Process Management. While this stage is typically defined by politicians or public agencies’ planner, it can include many other stakeholders. This chapter includes tools to synthesise the findings of the diagnostic phase (A1) to discuss the viability of the project through resources

management (A2), and to discuss strategies (A3) and set evaluation indicators that should be consensual and reviewed at the end of the process (A4).

D. Design

The Design phase sits between analysis – what should be done; how; for whom; with what resources, etc. – and execution – the actual intervention, which may or may not be built. Responsibility for the Design stage lies with architects, although whose voice is more important has been the subject of dispute by professionals, users and clients. Far from being a binary discussion, there are different ways in which the design as negotiated between different stakeholders, co-designed, can take place. Informed by the inclusion of users in the design process and resource scarcity after 2008, sections in this chapter address co-design (D1), design with indeterminacy (D2), designing with limited resources (D3), dodging (outdated) regulations (D4), and reclaiming (city spots) (D5).

E. Execution

Execution is probably one of the most engaging moments in architecture, and certainly the most time-consuming and economically demanding. While physical interventions often significantly support social change, community architects are questioning the need for major investments typical of the welfare state as the standard approach to spatial problems, since the same result might be achieved with cheaper tactical operations than could save a significant amount of resources. Thus, the first section of this chapter considers tools for no-construction (E1). The second discusses strategies to reuse materials to save construction costs and reduce the carbon footprint (E2). The third addresses the inclusion of users in co-construction (E3), which can take place either individually as do-it-yourself (DIY) or collectively as do-it-together (DIT).

Lastly, a section includes actions that catalyse or trigger new actions, regulatory changes, or longer-term transformations (E4). So-called tactical urbanism or on-site prototypes fall into this category, which may also include contestation actions in the form of activism.

P. Post-occupancy

Post-occupancy begins when the space is used by residents, which does not necessarily mean that the building is finished. The inclusion of time as a design parameter understands the building as permanently under construction and in process of adaptation to users' needs. Tools in this chapter include the assessment and evaluation of process and outcomes (P1), which can be internal or external; and this should include a review of the indicators set in the Analysis and Strategy stage (A4). Second, tools include post-occupancy technical support to residents and building monitoring (P2), which produces learning and insights for residents, procurement agency and technical teams through direct feedback on design decisions taken. This also offers inhabitants the opportunity to improve the way they use or operate the building by better understanding the impact of design decisions. Finally, the Post-occupancy stage includes a section of tools that allow knowledge transfer and replicability of the process (P3), including a bibliography organised by manuals and toolkits, process reports, and online resources.

Toolkit structure

This structure is optimised for the use in research and practice. In terms of research, it enables an analysis of case studies through their process. Figure IV-4 exemplifies the employment of the Toolkit to analyse a work of architecture developed through collaborative design methods (discussed in detail in Chapter

V). The left-hand page analyses from top to bottom: procurement management (ownership, process trigger, procurement lead, funding, and use management and maintenance responsibility), and the decision-making ladder.⁶³ Below, the alphanumeric codes in blue indicate which specific tool of the Toolkit is employed. On the right-hand page, tools are organised chronologically and are followed by the specific application of the tool to the project.

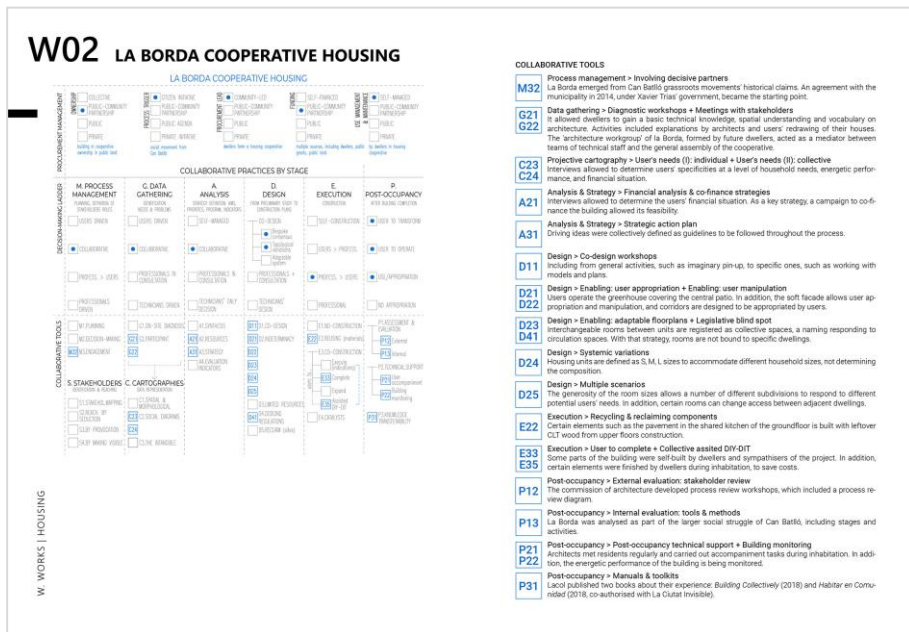


Figure IV-4. Representative example of the analysis enabled by the Toolkit; Alphanumeric codes refer to tools in the Toolkit. In this example the analysis concerns la Borda cooperative housing, see Annex 3 for full analysis.

⁶³ As theorised in Chapter III and included in the tool M32 of the Toolkit.

In terms of practice, an extended version of Figure IV-1 is translated into a flow chart of the proposed methodology to develop collaborative architecture (Figure IV-5, explored in Chapter VI). The flow chart starts at the bottom left (IN) and is followed clockwise, going through all the procurement phases described above and the key decisions made in them. Not all projects may need all the steps, but this diagram is applicable to any kind of project in terms of type or dimension. In each stage, the blue alphanumeric codes link the tools with the Table of Contents.

COLLABORATIVE ARCHITECTURE TOOLKIT FLOWCHART

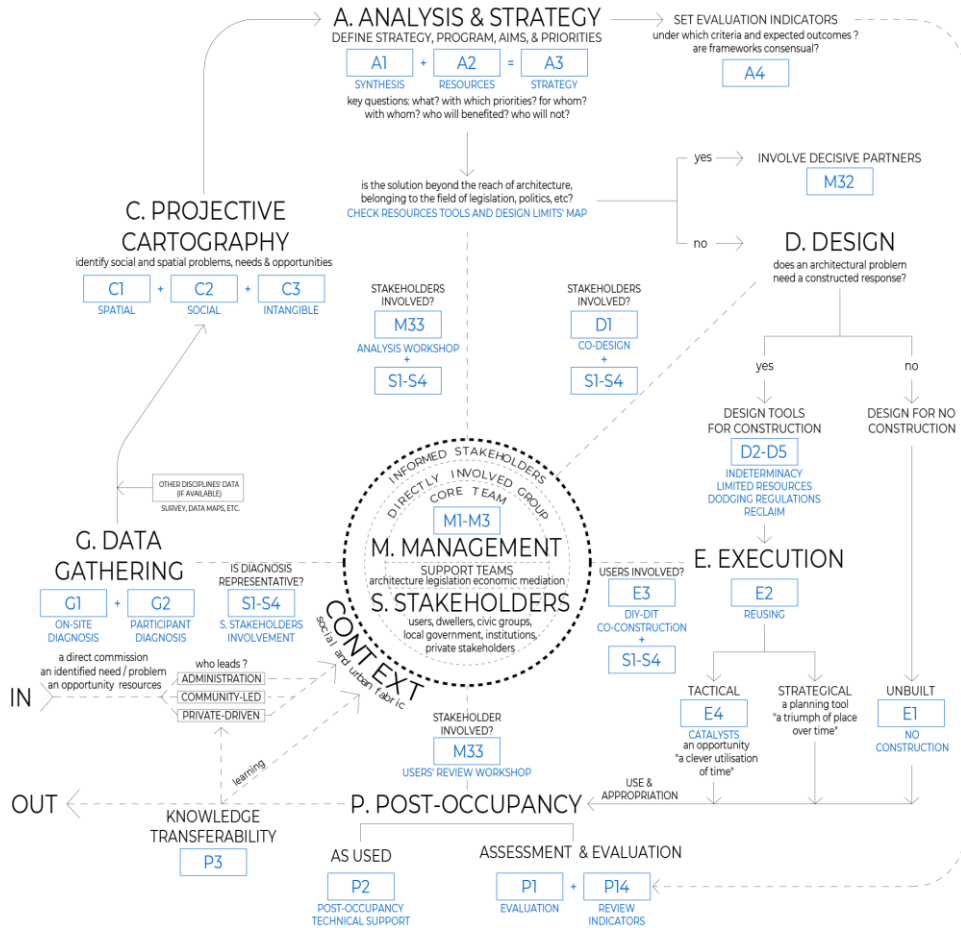


Figure IV-5. Toolkit flowchart, or proposed adaptable methodology, as an extended version of the diagram presented in Figure IV-1. The flow chart starts in bottom left corner (IN) and follows a clockwise direction. In blue, alphanumeric codes correspond to specific sections and tools.

TOOLKIT RESEARCH METHODS

The development of the Toolkit followed a mix-methods inductive research approach, which, as defined by Patton (2015, pp.122–123), has three steps:

1. Qualitative exploration with a small purposeful sample using open-ended questions and inductive analysis.
2. Recognition of patterns and enquiry using a larger sample.
3. Confirmation of patterns and gaining a deeper understanding through in-depth interviews.

I implemented the two first steps through practice-based research and theoretical research. Three consecutive prototypes were drafted, namely versions 1 (June 2021), 2 (August 2021; Figure IV-6) and 3 (September 2021). Following Patton’s sequence, each of these versions progressively included an increasing number of tools, broadening the content and scope of the Toolkit.

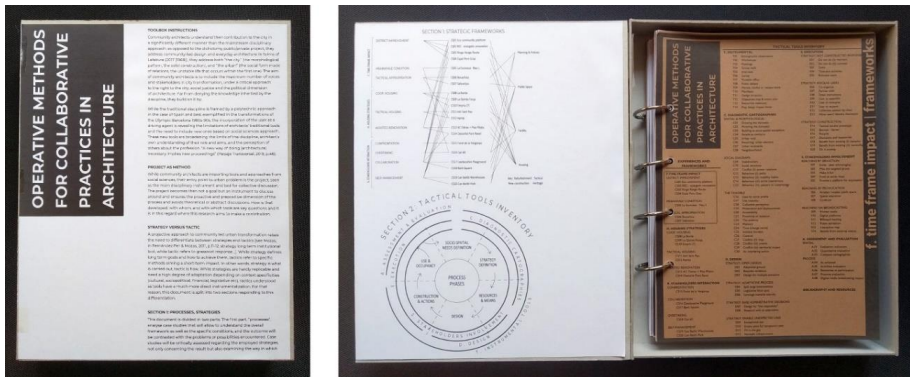


Figure IV-6. Toolbox prototype in version 2, August 2021. Left: toolbox box, with instructions shown on the cover. Right: the opening of the box reveals two diagrams of the content to guide the reader (left, which evolved into the diagram shown in Figure IV-5) and the Table of Contents (the current version of which can be seen in Figure IV-3). On the right-hand page, the current chapter is marked in the Table of Contents.

Patton’s third step included testing the Toolkit through PAR: this took place through 19 workshops with seven architectural practices between September 2021 and March 2022 (Figure IV-7). Six of these are professional

practices (Lacol, Arqbag, Equal Saree, Celobert, Straddle3 and MUT), while the seventh set of workshops took place in collaboration with Arquitectos de Cabecera's (AC) design studio at ETSAB (ITAC, Taller Temàtic AC; AC Thematic Studio).⁶⁴

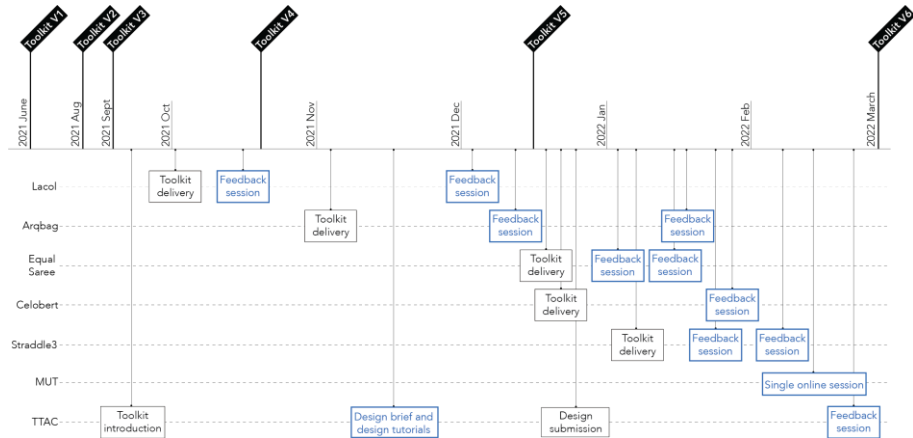


Figure IV-7. Participative Action Research (PAR) with architects' collectives in Barcelona, in relation to the evolution of the Toolkit. Timeline of PAR method: Toolkit versions (top) in relation to sessions with different practices (below). Version 3 of the Toolkit was employed for the workshops and subsequently improved during the process.

A total of 23 projects by architectural practices were analysed with their authors in workshops that used the Toolkit for a joint reflection on their practice (Figure

⁶⁴ The tutors for the workshop were Ibon Bilbao, Josep Bohigas, Zaida Muxí and Tonet Font. The 28 students were Mei Anglada Tort, Leire Ayala Garcia, Alex Benito González, Arnau Borrell Puig, Juan Busquets Sanromà, Marc Castellnou Velasco, Pol Cuartero Parreu, Anna-esther Diez Molinero, Marina Faner Bagur, Maria de l'Alegria Garrofé Pascual, Joan Graell Collell, Natàlia Ayelén Guaglianone Úbeda, Haneul Hong, Sara López Márquez, Pere Luna Mateu, Albert Massana Miralles, Pol Lluís Mateo Chedas, Alessandra Mencancini, Guillem Millán Ganaza, Marina Paredes Sánchez, Alessandro Pecci, Maria Teresa Pennes Casla, Judit Pou Rosich, Patricia Sanchez Perez, Pol Soto Morgade, Marc Vidal Badia, Xiao Yiu, Guadalupe Zupanovich.

IV-8 and Figure IV-9).⁶⁵ The selection of projects followed two criteria. First, they should be representative of projects of a diverse nature that addressed scenarios of different complexity to understand the limitations of the tools in terms of project type and scale. The projects analysed included housing, facilities and public space. Second, they should all have gone through all the procurement phases, to allow a post-occupancy evaluation of the project and of the design process in itself.

Architectural practice (participating members)		
HOUSING		
<u>New Housing Models</u>		
W01	ATRI + APROP Tactical accommodations	Straddle3 (David Juarez)
W02	La Borda Cooperative Housing	Lacol (Cristina Gamboa and Pol Masoni)
W03	Cirerers Cooperative Housing	Celobert (Jan Vidal, Miquel Mayor, Jordi Carbó, Cristina Sitjà, Ester Camps, Diego Carrillo)
W04	Guimerà Senior Cohousing	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
<u>Refurbishment</u>		
W05	Pas a Pas les Planes	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
W06	Community Energy Refurbishment (REC)	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
W07	Lancaster, 'Guernika'	Arquitectos de Cabecera (author analysis)
FACILITY		
<u>Recovery Industrial Heritage</u>		
W08	Can Batlló Complex	Lacol (Cristina Gamboa and Pol Masoni)
W09	Warehouse 11	Lacol (Cristina Gamboa and Pol Masoni)
W10	Coopolis Phase 0	Lacol (Cristina Gamboa and Pol Masoni)
W11	Arcadia School	MUT (Judith Villegas and Aritz Villalba)
W12	Can 60	Arquitectos de Cabecera (author analysis)
W13	La Escocesa Warehouse L	Arquitectos de Cabecera (author analysis)
<u>Extension/Transformation Existing</u>		

⁶⁵ The complete analysis of the 23 projects can be found in Annexe 3, while a discussion of the Toolkit as an analytical instrument, T₂, is presented in Chapter V.

W14	(e)co Platform	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
W15	Pere Grau Space	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
W16	Coeducative Playgrounds	Equal Saree (Júlia Goula and Dafne Saldaña)
<u>Temporal Appropriation</u>		
W17	Bocachica	Arquitectos de Cabecera (author analysis)
PUBLIC SPACE		
<u>Skateparks</u>		
W18	SK8+U Arbúcies	Straddle3 (David Juarez)
W19	La Santa Urban Sports Park	Straddle3 (David Juarez)
W20	Workers Movement Square	Straddle3 (David Juarez)
<u>Square And Streets</u>		
W21	Baró Square	Equal Saree (Júlia Goula and Dafne Saldaña)
W22	Ringo Rango Route	Arqbag (Jordi Mitjans, Simona Cerri, Júlia Dubois)
<u>Appropriation</u>		
W23	Safaretjos	Arquitectos de Cabecera (author analysis)

Figure IV-8. List of projects analysed organised by project type (left-hand column) and architectural practice involved in the workshops (right-hand column). The whole analysis can be found in Annexe 3.

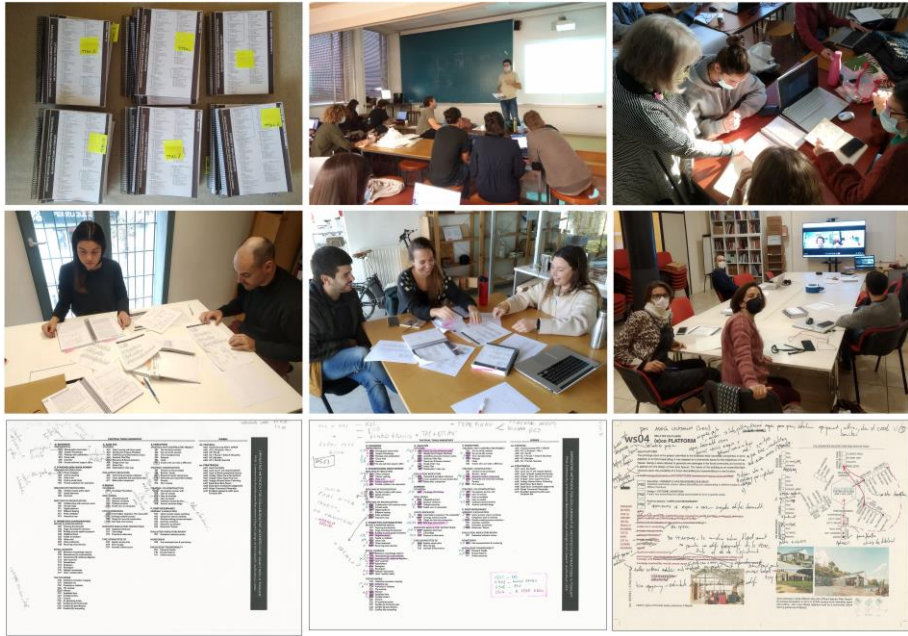


Figure IV-9. Pictures of action research workshops. Top row: at TTAC, at ETSAB: Toolkits (left), presentation of the Toolkit to students (middle), and design tutorials with Zaida Muxí (right). Middle: during workshops with architectural practices: Lacol (left), Arqbag (middle), and Celobert (right). Below: material derived from the workshops: notes taken by Lacol (left) and Arqbag (middle) indicating which tools were used in specific projects, employing the Table of Contents of the Toolkit as a basic document. Right: notes taken by the author in the third workshop with Arqbag.

Three workshops took place with each practice.⁶⁶ First, an introductory one where the Toolkit was explained along with some preliminary discussions. Second, a discussion was organised some days after the practices had looked at the Toolkit and analysed their project(s), noting the tools employed (Figure IV-9, bottom row). In addition to discussing the projects based on the tools in the

⁶⁶ Given the limited time and availability of the practices, in some cases workshop sessions had to be condensed. As can be seen in Figure IV-7, Celobert sessions were condensed into two, while in the case of MUT only one session took place. However, a structural revision was less necessary towards the end of the process, as some amendments had already been pointed out during the first workshops.

Toolkit, participants offered me feedback on both Toolkit-specific aims T₁ (theorisation of practice) and T₂ (analysis of practice through case studies). Third, and finally, the last workshop jointly revisited my analysis of the tools employed in the projects and the conclusions, which allowed me to add missing information about the case studies.

For T₃, the Toolkit as informing practice, the six practices were asked to provide feedback on its readability and applicability to further projects, considering both its general structure and the specific tools presented.

In addition, this topic was addressed in the TTAC workshops at ETSAB, specifically in the seminar course directed by Zaida Muxí that ran in parallel to the 5th year AC studio unit. The TTAC's pedagogical approach is based on a direct relationship with specific neighbourhoods and local communities.⁶⁷ The studio promotes a social turn in academia as a response to a disciplinary commitment to urban problems which are currently neither addressed by institutions nor by professional practice. The TTAC 2021 focused on the vulnerable housing block les Casetes, in Bolvia street (Poblenou neighbourhood, Barcelona). The Toolkit was introduced to TTAC students in September 2021, with 10 copies distributed to groups of three or four people. As a brief, they were asked to design a collaborative procurement process linked to their studio project, specifying design methods employed in all procurement phases. Regular process design tutorials were developed by Professor Zaida Muxí, with a mid-term session attended by me to find out about problems in understandings the information and to answer any questions. The students' submission at the end of the term included their version of the Toolkit (January

⁶⁷ In the UK these take the name of "live projects", originally implemented in Sheffield School of Architecture in the 1990s and in many other schools ever since. Source: www.liveprojects.org. Accessed 01.12.2021.

2022) was followed by a feedback session with tutors in February. This process allowed me to discuss the Toolkit as a pedagogical and projective tool (both discussed in Chapter VI).

The workshops raised the issue of designing the Toolkit as a physical object (Figure IV-10), as it was considered that the readability of a large document proved to be difficult in a digital format, particularly on small screens. Collaborative architecture is often a non-linear process where planning is not possible (or even desirable) from the start of the project; sometimes certain steps rely on previous ones but have a fluid relation. For this reason, the Toolkit should not be read as a manual or as guidelines, nor should the chapters (or the flowchart) necessarily be read in the order they appear in the Toolkit. To respond to this, the Toolkit was spiral-bound to allow the reader to choose the point at which they wish to engage with the Toolkit – that is, the first stage of the process. Accordingly, the chapters have not been numbered from one to eight: instead, each is given a letter in a non-alphabetical order. Eventually, the spiral binding could allow pages to be added or removed.

The Toolkit is designed in a size for ease of manipulation: 17 x 23.5 x 2.8cm. To avoid wear on the pages and corners during transport, given the different scenarios in which it might be employed – architecture studios, workshops with stakeholders, and meetings – the second version was presented in a box made of grey-coloured 1,5mm thick cardboard. However, derived from the need to optimise resources to distribute multiple copies for PAR, the box was discarded. The eight dividers and their respective back covers that separate the chapters are also printed on brown 140gsm cardboard, allowing easy tactile identification of chapters. Each divider presents the Table of Contents (Figure IV-3) of the whole Toolkit, marking the current chapter for simple navigation, while all the back covers show a flow chart (Figure IV-5) for ease of use. The

Toolkit contains a total of 118 analytical sheets printed on double-sided 100gsm bright white paper, to avoid transparency and the unwanted visibility of the images printed on the reverse of the sheet, offering an appropriate balance between printing quality and weight: the object weighs 853g. In its last version, the 332 pages of the Toolkit contain 977 images – including photographs, drawings and diagrams – of collaborative architectural processes, products and performance.

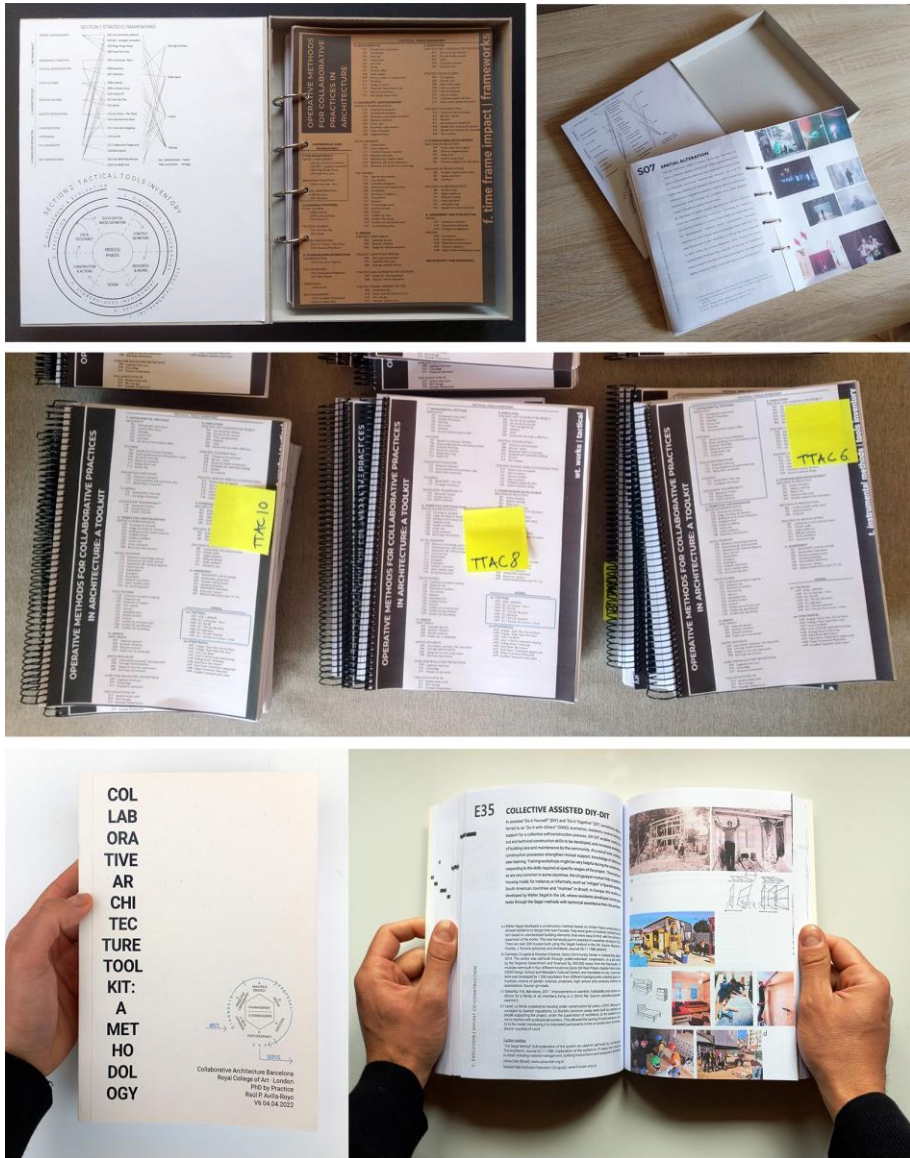


Figure IV-10. Toolkit in three different versions. Top: 2nd version in August 2021, with a box for safe transport. Middle: Toolkit in its 3rd version, the first employed in PAR in September 2021. Below: 6th version in March 2022, with a book binding.

Overall, there was a consensus among the practices involved and the TTAC tutors that there was a need for such a toolkit that consolidates the tools that architects typically lack in their academic training. The reasons given were several: first, the Toolkit systematically organises many tools that were already being employed. This is important for its coherent use in practice and as a pedagogical tool. TTAC tutors emphasised the value of the Toolkit to organise theoretical and practice-based discussions. Second, many of the practices acknowledged that they had not been aware of some of the tools presented, but also the usefulness of extended versions of ones they were already aware of with nuances that could be incorporated in future projects. In addition, participating collectives acknowledged that they were unaware of the historical tradition of collaborative design methods in architecture as presented in the Toolkit. Third, by developing this process in parallel with several practices, they indirectly informed each other's work and shared tools and design methods through the Toolkit. Thus, it served to trigger a knowledge and experience exchange.

TOOLKIT GENEALOGY

The Toolkit became a platform for bidirectional feedback and reflection between workshop participants and me, applying observations from the research to their practice and enabling me to enrich my research on the disciplinary shift through the Toolkit. In summary, all the participants were very positive about the applicability of the Toolkit to future projects. However, they also pointed out deficiencies that could be improved in subsequent versions.

As a result of PAR, the Toolkit crucially improved its readability and usability. Thus, rather than being a predefined object both in form and content, the design of the Toolkit evolved as a result of an experimental process that, beyond quantitative changes, underwent qualitative ones: revisions from the content, organisation and improvement of existing tools and the incorporation

of new ones, informed by conversations with participants and supervisors. Likewise, the title of the Toolkit went through several iterations – the first abandoned the term “manual”, as this implies an object that delivers strict instructions rather than an open methodology.

Figure IV-11 shows the generative process of the Toolkit from versions 3 to 6. Less relevant than the specific titles of the tools, which changed significantly, is the visualisation of changes in the structure of the Toolkit (blue diagonal lines) and the new tools that were incorporated as a result of PAR (tools underlined in yellow) responding to the need to analyse the work of the practices.

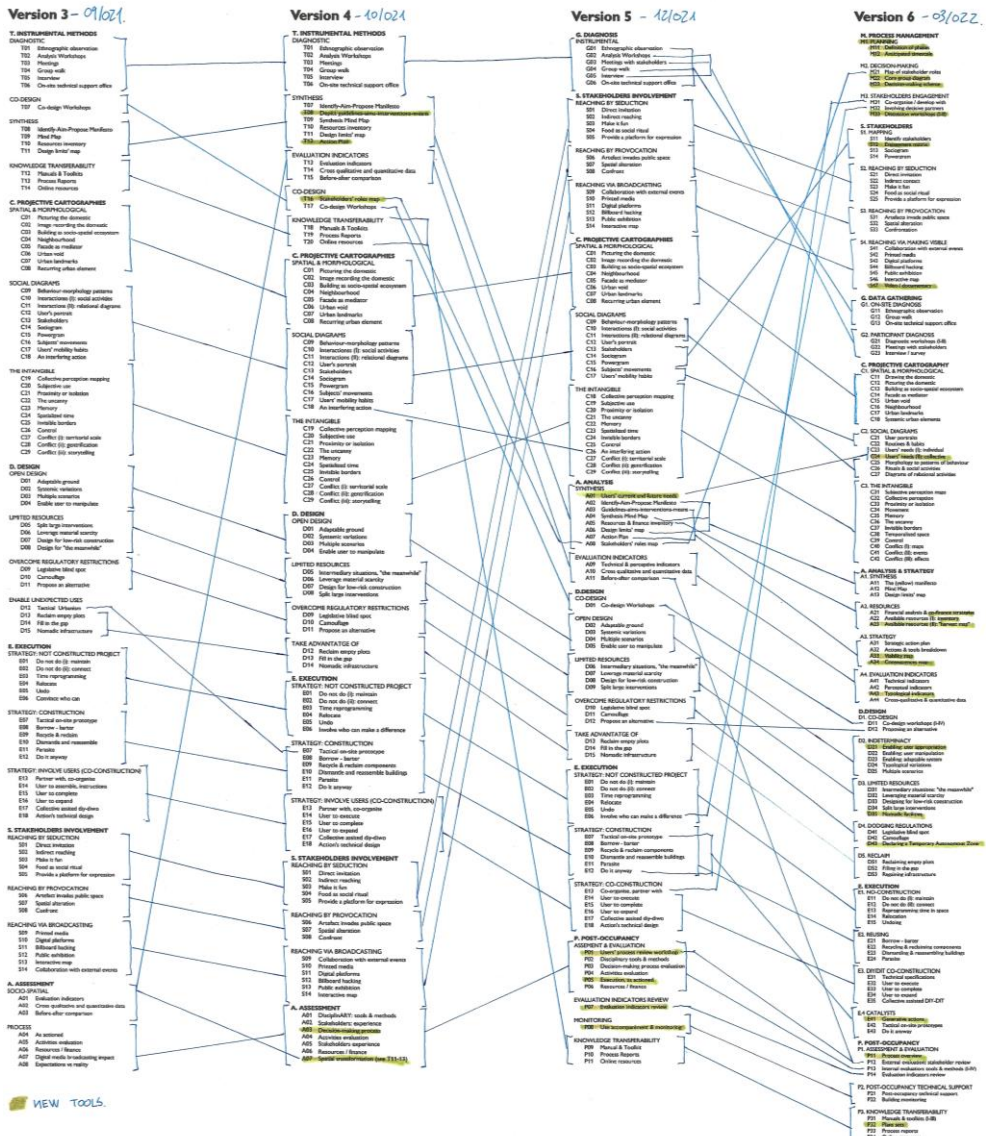


Figure IV-11. Diagram of the evolution of the Toolkit Table of Contents, from versions 3 to 6. Blue lines represent the reorganisation of tools, while tools added in each phase are underlined in yellow. Not shown in this diagram, each version of the Toolkit included a revision of texts and projects displayed in the tools.

Version 3 of the Toolkit, used in the first workshops developed with Lacol, revealed major problems in the organisation of the sections and how information was communicated in different sheets. While participants recognised the value of the Toolkit in consolidating and replicating collaborative architecture projects and expressed their interest in employing it in the future, they questioned the lack of systematisation in the written description of the Tools, the purpose of some of which was not stated clearly. Secondly, they suggested that the location of certain tools was unclear. This was only solved in Version 5, after receiving the same feedback from the second office with which the Toolkit was tested, Arqbag. While Versions 3 and 4 included a first chapter, T. Instrumental Methods, that aimed to intersect with different project stages, Version 5 spread these tools, repeated if necessary, over several stages; this was the case for example with the workshops with users in different phases. By matching the chapters with the project stages this change facilitated the readability of the Toolkit. Additionally, it included a specific G. Diagnosis chapter a new section added shortly afterwards, that was incorporated as a chapter in Version 6: M. Process Management. After Version 5, any office could make structural comments to the Toolkit, and is the reason why Version 6 of the Toolkit was only carried out when the process ended.

Importantly, at the same time the Toolkit was informed by TTAC students' feedback. In early discussions, some students asked me to clarify certain tools, enabling me to identify which of them were not explained clearly in relation to either their aims or their applicability. Some of these concerns discussed during tutorials were found weeks later when students returned their Toolkit (Figure IV-12). Second, questions arose about the location of certain tools in specific chapters, which were addressed in Version 5 of the Toolkit. Finally, I asked students to suggest further tools that had not been included. After reviewing students' submissions (in the form of customised Toolkits), no new tools were

identified – this was in contrast with the workshops with architectural practices, which were able to suggest many nuances or new tools for the Toolkit.

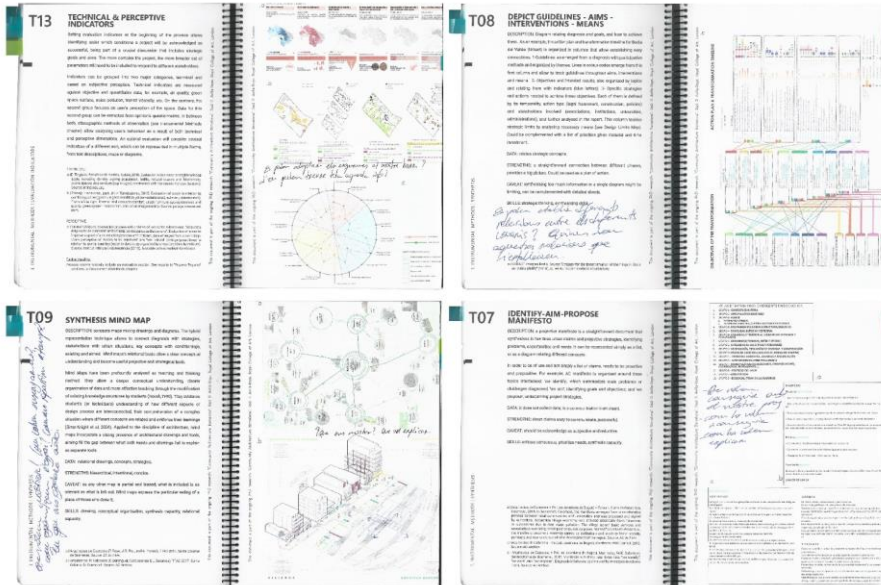


Figure IV-12. Toolkit in its 4th version after returning from TIAC students, showing marks and notes in Catalan left by students aiming to contribute to improve the Toolkit. They translate as: “Can we adapt these diagrams to our neighbourhood? Where can we get all this information?” (T13 top left); “What do we want to achieve with our project, and how do we want to explain it”; “Can we establish different relationships between different users? What are those relationships?” (T08, top-right); (T07, bottom right). The note on T09 (bottom-left) points directly to the lack of clarity in describing a tool: “What does it show? What does it explain?”.

Integral to the Toolkit as the core of research, the evolving structure of the PhD paralleled that of the Toolkit in responding to the practice research framing. Thinking about the structure of the PhD through mind maps (Figure IV-13, see Annex 5 for larger images) has been key to clarify the dimensions of practice and theory and its organisation into a structure of chapters. The evolution of the mind map evidences how the organisation of both research methods and content changed over time. In 2017 (Research Proposal (RP) for

the PhD programme application) and 2018, the organisational structure responded to project typologies (facilities, urban space, and housing). In 2019 and 2020, the chapters and Toolkit were organised thematically in the topics in which the disciplinary shift was more obvious (architectural pedagogies, housing, and urban governance). After mid-2021, and particularly when the work was informed by PAR methods, the instrumentalisation of the Toolkit became much more central to research and discussions.

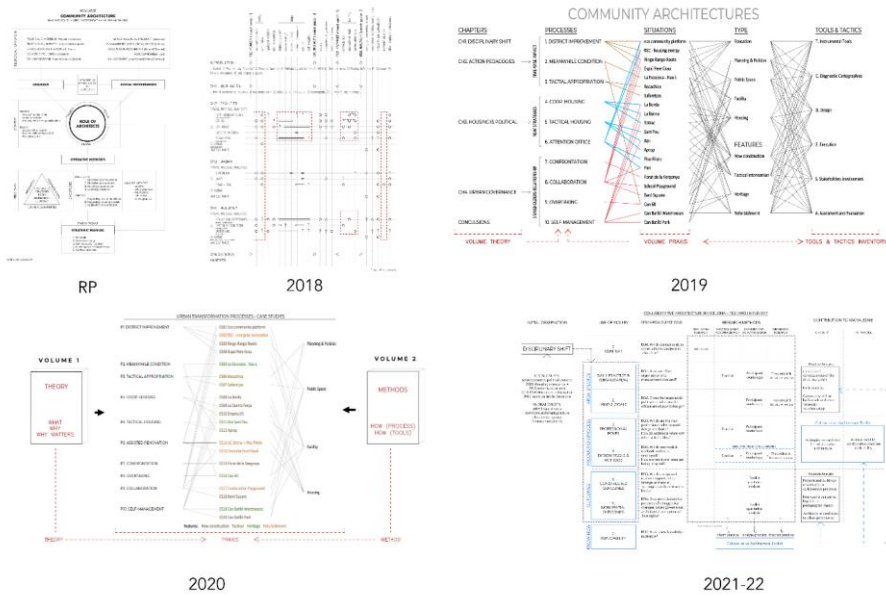


Figure IV-13. PhD and Toolkit mind map genesis from the Research Proposal for the PhD application (RP, 2017) to PhD submission (2022). Diagrams of better quality can be found in Annexe 5. The final mind map (bottom right in Figure IV-13) is discussed in Chapter 1.

Two major questions arise regarding the usability of the Toolkit after its testing. First, whether the Toolkit should be presented in an open form that could be updated regularly. In other words, raising the apparent contradiction between a printed object, which is immutable, or a format – whether physical or digital – that would allow practitioners to modify it according to their needs and practices, adding or removing tools, or adapting them.

The second question addresses the audience for the Toolkit. It has been tested in the contexts of both professional architectural practice and academia, and although efforts have been made it has not been possible to test it with municipal technical staff and agencies. This is a key step in the future since, as the architects' collectives in the workshops frequently argued, there is a problematic lack of understanding collaborative design methods in public procurement agencies.

Likewise, after developing the PAR workshops, it is clear that some improvements could be made for further Toolkit testing with architectural practices, adapting workshops to the familiarity of the practice with the tools and the kind of feedback that the exercise aims to elicit. Given that collaborative practices are still at an early stage of development in Barcelona, the current version of the Toolkit is not presented as a final iteration but as the beginning of a long-term project beyond this PhD.

V.

THE TOOLKIT AS ANALYTICAL INSTRUMENT

CASE STUDY RESEARCH

This chapter discusses how the Toolkit can be used in case study analysis. 23 built works from Barcelona developed through collaborative practices were analysed through the Toolkit and Participatory Action Research (PAR), as described in Chapter IV.⁶⁸ The aim is to explore distinctive characteristics and design opportunities emerging from collaborative architectural practices in relation to other forms of procurement.

Figure V-1 organises the projects by type and their procurement and management frameworks. This information was gathered by employing the tool M32 Decision-making Scheme in PAR workshops (Figure V-2).

⁶⁸ The detailed analysis sheets can be found in Annexe 3.

Project type		Ownership	Process trigger	Procurement lead	Funding	Use management and maintenance
HOUSING						
<u>New Housing Models</u>						
W01	ATRI Tactical accommodations	Public-community partnership	Partnership citizen initiative + public agenda	Citizen initiative	Public-community partnership	Public-community partnership
	APROP Tactical accommodations	Public	Public agenda	Public agency	Public	Public
W02	la Borda cooperative housing	Public-community partnership	Citizen initiative	Citizen initiative	Public-community partnership	Self-managed
W03	Cirerers cooperative housing	Public-community partnership	Partnership citizen initiative + public agenda	Citizen initiative	Public-community partnership	Self-managed
W04	Guimerà Senior Cohousing	Private	Private initiative	Private	Private	Private
<u>Refurbishment</u>						
W05	Pas a Pas les Planes	Public	Partnership citizen initiative + public	Partnership citizen initiative + public	Public – community partnership	Public
W06	Community Energy Refurbishment (REC)	Private	Partnership citizen initiative + public agenda	Citizen initiative	Public – community partnership	Private
W07	Lancaster, 'Guernika'	Private	Citizen initiative	Citizen initiative	Residents	Residents
FACILITY						
<u>Recovery Industrial Heritage</u>						
W08	Can Batlló complex	Public	Citizen initiative	Citizen initiative	Public – community partnership	Public – community partnership
W09	Warehouse 11	Public	Citizen initiative	Citizen initiative	Public – community partnership	Self-managed
W10	Coopolis Phase 0	Public	Citizen initiative	Citizen initiative	Public	Self-managed
W11	Arcadia School	Public	Citizen initiative	Citizen initiative	Self-managed	Self-managed

W12	Can 60 (phase 1/phase 2)	Private / Public	Citizen initiative / public agenda	Citizen initiative / Public agency	Self-managed / public	Self-managed / public
W13	La Escocesa Warehouse L	Public	Citizen initiative	Citizen initiative	Self-managed	Self-managed

Extension/Transformation Existing

W14	(e)co Platform	Public-community partnership	Partnership citizen initiative + public agenda	Citizen initiative	Public	Public
W15	Pere Grau Space	Public	Partnership citizen initiative + public agenda	Partnership citizen initiative + public	Public	Public
W16	Coeducative playgrounds	Public	Public agenda	Public agenda	Public	Public

Temporal Appropriation

W17	Bocachica	Public	Public agenda	Partnership citizen initiative + public	Public – community partnership	Public
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PUBLIC SPACE

Skateparks

W18	SK8+U Arbúcies	Public	Citizen initiative	Citizen initiative	Self-managed	Public
W19	La Santa Urban Sports Park	Public	Citizen initiative	Partnership citizen initiative + public	Public – community partnership	Public
W20	Moviment Obrer Square	Public	Public agenda	Public agency	Public	Public

Square And Streets

W21	Baró Square	Public	Public agenda	Public agency	Public	Public
W22	Ringo Rango Route	Public	Partnership citizen initiative + public agenda	Partnership citizen initiative + public	Public – community partnership	Public

Temporal Appropriation

W23	Safaretjos	Public	Citizen initiative	Citizen initiative	Community	Deteriorated
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Figure V-1. List of projects analysed applying the Toolkit as an instrument to conduct PAR workshops, organised by project type. The whole analysis can be found in Annexe 3.

M23

DECISION-MAKING SCHEME

A decision-making scheme defines who will decide what, in which phases, and with which tools. All projects go through this decision-making stage, although its elements are often accepted as given without being questioned. Typically, in both public and private procurement, diagnostic and strategic analysis phases are determined by political agendas and/or local authority technical staff. Design and execution leadership belongs to architects who operate either within procurement agencies or autonomously, and coordinate other teams of experts. Finally, post-occupancy is the phase when residents inhabit or use the space. Collaborative architecture and community-led projects can challenge this structure, which conditions the outcome. The two tools presented here allow us to discuss stakeholder agency in decision-making in different phases of projects. In other words, to show evidence of power relations and establish the agency of experts, institutions, users, and other stakeholders.

There is no single best decision-making scheme scenario for all projects, but rather several possibilities, depending on different stakeholder roles and collaborative dynamics in different phases. As an example, in the architecture of Walter Segal or John Habraken, architects take a leadership role in defining the system, while residents take the lead in construction and habitation decisions, according to the pre-defined rules set by the architects. In other cases, such as self-managed cooperative housing, all the phases are characterised by a collaborative process defined by future residents, organised around a general assembly and work groups.

Decisions can be taken by using different methods, such as core group decision-making, work groups, consensus, or by votation (see Sánchez Alonso 2007, pp 41-46 and Cembranos and Medina 2014, pp.118-137; both books contain useful information and tools for decision-making in heterogeneous groups).

- a | Diagram of different forms of decision-making in different stages. Source: author.
- b | Stakeholder engagement concerning different procurement phases, where specific participative methods can be applied. This engagement can take place in single or multiple phases, depending on the project. Source: author.

Further reading:

Sánchez Alonso, M. (2007) *La Participación: Metodología y Práctica*. Madrid: Popular.
 Cembranos, F. and Medina, J. A. (2014) *Grupos Inteligentes: Teoría y Práctica del Trabajo en Equipo*. Madrid: Popular.

.a

CITIZEN ENGAGEMENT IN PROJECT STAGES (= TOOLKIT CHAPTERS)					
M. Process Management S. Stakeholders	O. Data gathering C. Proj. Cartography	A. Analysis & Strategy	D. Design	E. Execution	P. Post-occupancy
User-driven	User-driven	Users decide	Users design, "architecture without architects"	Self-construction, no professionals involved	Users to transform the space, topological change
Consensual between users and administration	Mostly defined/developed by users	Consensual between users and administration	Co-design, consensual decisions	Users with partial professional construction	Users to adapt the space, movable devices
Technical staff decisions in no binding consultation	Mostly defined/developed by technical staff	Technical staff decisions in no binding consultation	Technical staff in consultation, for example options	Professional construction with eventual users	Users to appropriate through objects and activities
No citizen involvement	No citizen involvement	No citizen involvement	Professional design	Professional construction	Users to use, no appropriation

KEY DECISIONS
 Each of these stages could be broken down into separate discussions with potentially different stakeholders roles (toolkit section codes in blue).

M1 Phases and timescale	G1 G2 Methods and universe definition	A1 Socio-spatial needs definition	D Technical decisions / typology / standards / regulations	E1 Construction appropriateness	P1 Process evaluation
M2 Stakeholders' roles, agencies and responsibilities	C1 C2 C3 Identification of problems, needs, and opportunities	A3 Aims & strategies to achieve them	D Architecture / Identity / Culture	E2 E3 Technical decisions / DIY/DIT	P2 Degree of technical support / building use monitoring
M3 Stakeholders engagement		A3 Program and Priorities	D2 Degree of indeterminacy / use appropriation	E4 Tactical or strategic	P3 Knowledge transferability
S1 Stakeholders reaching		A4 Direct and indirect beneficiaries	D3 Materiality / resources management		P4 Maintenance responsibility
S2 Stakeholders mapping		A4 Evaluation indicators			

.b

MANAGEMENT	POSSIBLE STAGES	ISSUES	STAKEHOLDERS				DECISION-MAKING TOOLS	
			public agency	private association	dweller	neighbour group	assembly	working group
DIAGNOSIS	ANALYSIS & STRATEGY	Data gathering methods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Universe definition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DESIGN	EXECUTION	Socio-spatial needs definition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Aims & strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Program and priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Direct and indirect beneficiaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
POST-OCCUPANCY		Evaluation indicators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Typological / standards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Aesthetics / identity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Degree of use appropriation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Materiality / resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Technical decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Tactical / strategic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Process evaluation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Degree of technical support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Building/use monitoring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Knowledge transferability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Maintenance responsibility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure V-2. Tool M32 (Toolkit): Decision-making scheme. Used in the analysis of 23 built works.

In Annexe 3, the PAR analysis of each work is presented in a sequence of six pages (Figure V-3). The systematisation of this format allows a clear comparison between case studies, while mixing description and analysis with graphic information. The first page (Figure V-3, left) contains a listing of stakeholders involved in the project, grouped in the following categories: civic engagement, public administration, private stakeholders, community architects, and technical staff from public administration. This categorisation questions the single authorship approach to architecture products and underlines the dependence of architecture on collaboration with different stakeholders. Below, a description of the context and aims introduces basic information about the project, which is completed by the images presented on page 2 (Figure V-3, second left).

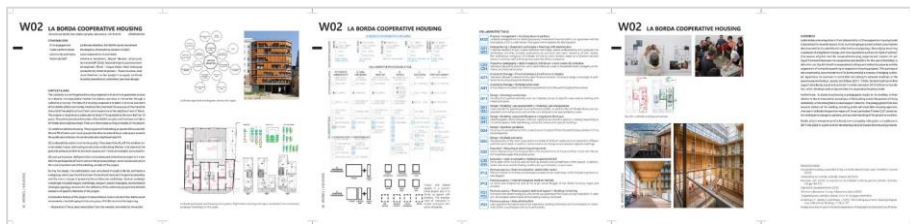


Figure V-3. The Toolkit as an analytical tool is exemplified in work W02: *la Borda Cooperative Housing*. Each work is systematically presented in this six-page layout.

The two central pages offer an analysis of the process developed as original research: page 3 concerns three interdependent dimensions: from top to bottom, procurement management (ownership, process trigger, procurement lead, funding, and post-occupancy management and maintenance), the decision-making ladder throughout procurement, and the collaborative tools of the Toolkit employed in each of the stages (Figure V-4, left).⁶⁹ Extending this

⁶⁹ The information in this section about the 23 works is presented above in Figure V-1.

information, on page 4 (Figure V-4, right) the collaborative tools employed are described chronologically and include a brief description of use and outcomes. The enquiry into collaborative tools by stage offers an original approach to the analysis of architectural processes by making visible the specific design methods that produced identifiable outcomes. Finally, the last two pages (Figure V-3, two on the right) contain more graphical information and conclusions of the analysis, which were corroborated with collectives' evaluation of the process and outcomes through PAR. The identification of design methods, outcomes and their evaluation may become reference points for other practising architects developing similar projects.

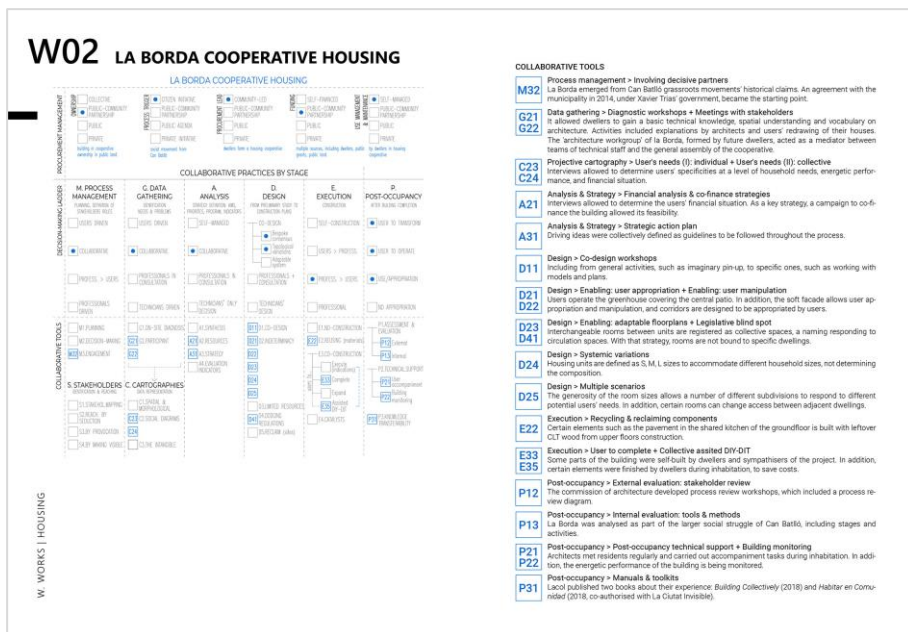


Figure V-4. Representative central pages of projects as analysed (see Annexe 3). On the left-hand page, there is a description of procurement management and the decision-making ladder in each of the procurement stages, followed by the collaborative tools employed in them. On the right-hand page, a chronological list of tools with brief descriptions is depicted. Blue codes refer to Toolkit tools

As well as the conclusions of each case study, which are presented on the last page of the respective analysis sheets and occasionally discussed alongside the thesis to support specific arguments, the analysis of the 23 works offers some general conclusions.

The first is that the 23 projects are representative of a whole range of project types procurement and management models, ownership, process triggers, leadership in procurement, funding and post-management models (as shown in Figure V-1). The inclusion of users and local stakeholders in these projects offers evidence that collaborative architecture ultimately relies on the will of the management team to implement it and on different stakeholders to engage with it.

Concerning the aims and timeframe, two kinds of projects have been identified: first, long-term planned strategic projects, and second, short-term tactical ones which catalyse other actions – such as long-term strategic projects or legislative changes (Figure V-5).

	Strategical	Tactical
Housing	W02 La Borda Cooperative Housing W03 Cirerers Cooperative Housing W04 Guimerà Senior Cohousing	W01 Tactical housing ATRI + APROP
Housing refurbishment	W06 Community Energy Refurbishment	W07 Lancaster, 'Guernika'
Facility	W14 (e)co Platform W15 Pere Grau Space W16 Coeducative Playgrounds	W09 Warehouse 11 W10 Coopolis Phase 0 W11 Arcadia School W12 Can 60 (from tactical to strategical) W13 La Escocesa - Nau L W17 Bocachica
Public Space	W18 SK8+U Arbúcies W19 La Santa Urban Sports Park W20 Moviment Obrer Square W21 Baró Square W22 Ringo Rango Route	W23 Safaretjos *

* Tactical urbanism falls in this category. Many other examples are explained throughout the toolkit.
 Note: Can Batlló and W05 Pas a Pas have not been included in this chart, since they are umbrella processes rather than specific projects. Can Batlló includes W09 Warehouse 11, W10 Coopolis Phase 0, and W11 Arcadia School. Pas a Pas includes W06 Community Energy Refurbishment, W14 (e)co Platform, W15 Pere Grau Space and W22 Ringo Rango Route.

Figure V-5. Case studies classified according to Michel de Certeau's (1988) differentiation between strategy and tactics.

The categories are based on de Certeau (1988, pp.35–39), who states that strategies depend on the vertical deployment of power in a controlled area, while tactics operate in fragmented, temporary and calculated actions - in a permanent search for opportunities. While conventional procurement falls into the category of strategy and activism into tactics, the case studies analysed proved that the boundary between these is blurry and that community architects are addressing both spheres with similar but adapted collaborative design methods: strategic projects include the parameters of permanence in relation to stakeholders involvement – with a stronger commitment over time – and the durability of physical interventions. In contrast, tactical projects offer the opportunity for reversible and sometimes rapid with less management and construction requirements. Projects like Coopolis Phase 0 (W10) or Arcadia School (W11) questioning hinge between tactical and strategical approaches; they are tactical temporary interventions that nevertheless might last years, questioning the

notion of temporality in urban interventions. Additionally, some of the projects include both strategic and tactical dimensions, for example, the case of Safaretjos, which included a long-term planning proposal and a short-term activation of underused space to evidence its relevance for the neighbourhood.

The systematic analysis of the projects presented in the sheets described above has enabled the identification of patterns of interrelated projects, namely an “umbrella pattern”, when a project serves as a framework for subsequent phases to take place, and a “derivative pattern” when several projects build on the direct experience of previous projects, which are similar in their contexts and aims (Figure V-6).

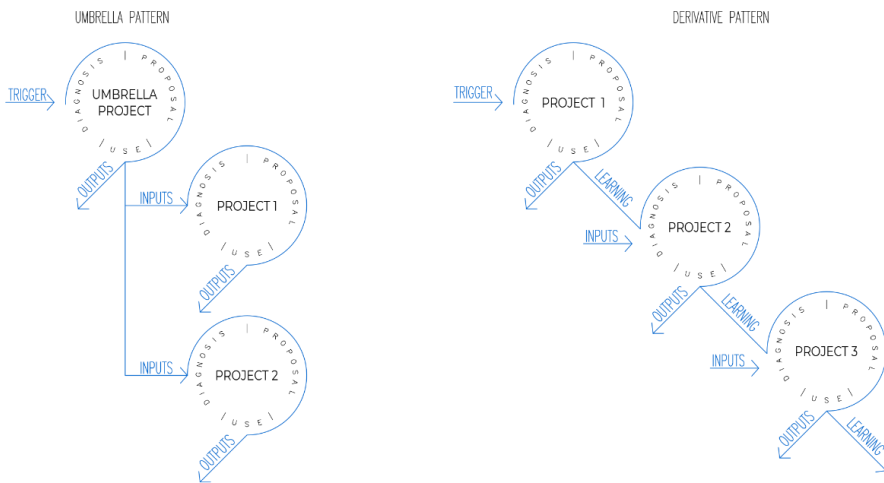


Figure V-6. Patterns of interrelated projects: umbrella (left) and derivative (right).

Figure V-7 shows the case studies organised chronologically, linking project-related patterns (in blue lines) together with relevant contextual events (top).

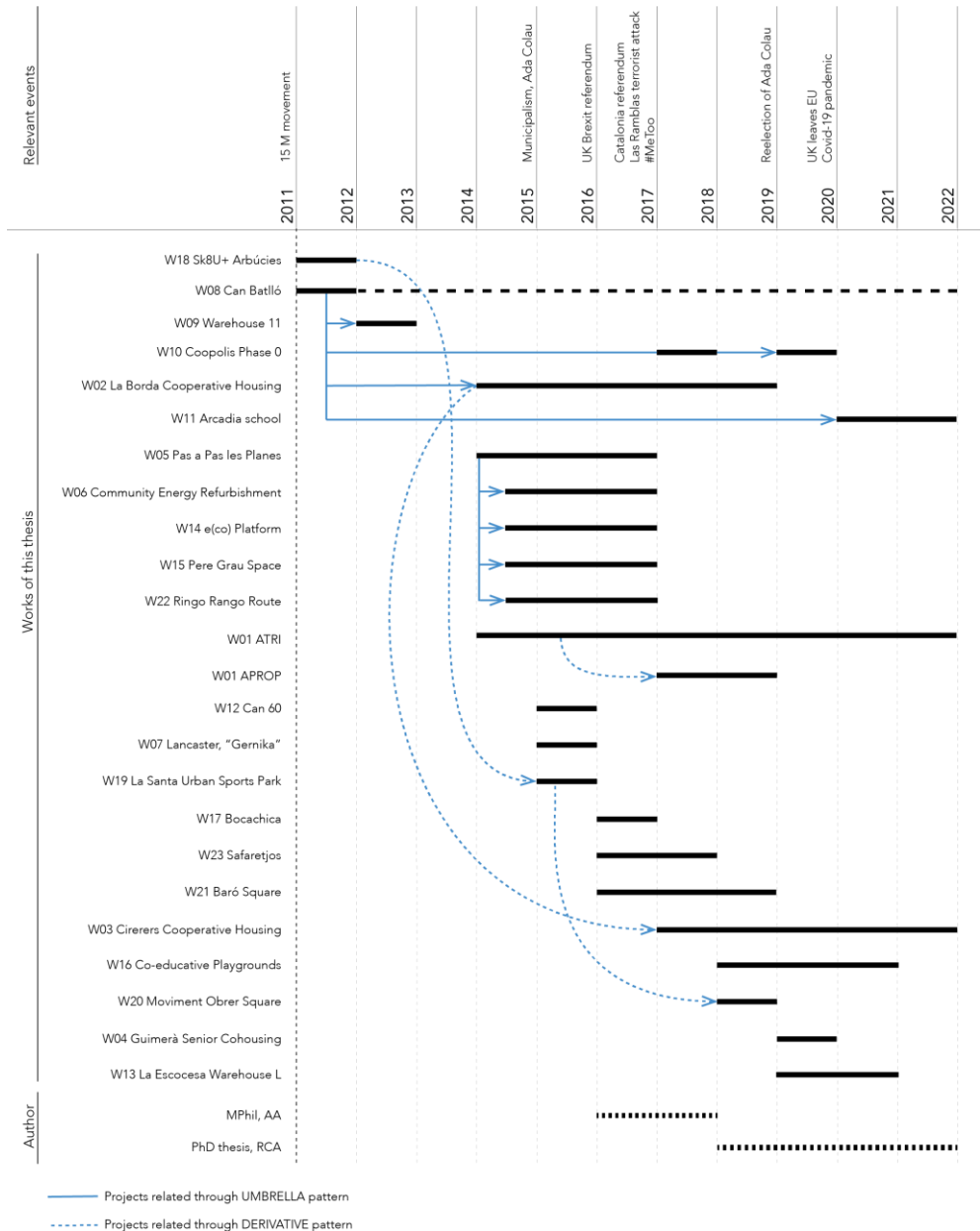


Figure V-7. The 23 case studies are presented chronologically. Some of them are related following the patterns identified, umbrella (blue continuous line) and derivative (blue dashed line).

An example of an umbrella pattern is the Can Batlló complex (W08), which included Warehouse 11 (W09), Coopolis Phase 0 (W10) and Arcadia School (W11). It also applies to Pas a Pas les Planes project (W05) which included the Community Energy Refurbishment (W06), (e)co Platform (W14), Pere Grau Space (W15) and the Ringo Rango Route (W22). While each project has a specific framework, they are all framed by an initial umbrella project, context or agreement. This process can happen spontaneously, as in the case of Can Batlló or Pas a Pas les Planes, or it can be planned by defining general guidelines for a regional plan or masterplan, with autonomous phases of execution.

The derivative pattern is identified in the case of cooperative housing: the success of la Borda (2012–2019) triggered two public design competitions in 2017 (five buildings, including Cirerers Cooperative Housing (W03)) and 2020 (three buildings, including la Quinta Força). Each generation of cooperative buildings was informed by the previous one and guided the following one (Avilla-Royo et al., 2021). For example, la Borda established a precedent of cross-laminated timber (CLT) construction in affordable housing, environmental strategies, and interpretation of the regulations to enable shared spaces that were not covered by existing legislation. In 2020, projects such as Cirerers by Celobert and la Balma by Lacol were developed by the Sostre Civic housing cooperative as an umbrella organisation.⁷⁰ Both Cirerers and la Balma applied the learnings from la Borda as enabled by the evaluation of the process, in terms of both management (the systematisation of decision-making protocols), and construction (including the use of CLT and co-design workshops, among many others). The buildings in the 2020 competition,

⁷⁰ Sostre Civic had also developed the refurbishment of an existing publicly owned housing building into cooperative housing in 2014 as a prototype in parallel to la Borda, named Princesa

currently under development, are building on previous knowledge and, besides co-design decision-making, are pushing experimentation compressed earth block (CEB) construction, experimentation towards cluster living units, and large-scale environmental systems such as greenhouses and green phytodepuration facades.

This derivative pattern is also observed in the skateparks developed by Straddle3: each of which included a more complex process: Sk8+U in 2011 (W18, 500m², 40.000€), la Santa 2015-16 (W19, 3000m², 190.000€) and Moviment Obrer Square in 2018-19 (W20, 6.000m², 1.0000.000€). The three projects in different municipalities exemplify the successful scalability of design methods in terms of budget, area, and complexity. They also confirm that the design methods employed were successful in addressing different users' needs (all skateparks) under different kinds of leadership and a distribution of roles between the municipality and users: in Sk8+U the municipality provided the land and enabled users (a group of teenagers accompanied by the technical team) to take the lead, raise resources and build it; in la Santa the municipality provided the resources and means and allowed users (young skaters in their 20s) to take the lead and partially build; while Moviment Obrer Square was framed by a larger Pla de Barris (Neighbourhood Plan) and thus municipal leadership and professional construction, while users (mostly amateur skaters with their families) were involved during the Diagnosis and Co-design stages. While the first two were small-scale projects managed by technical teams and users, the fact that Moviment Obrer Square belonged to a municipal development plan necessitated public management of the process and the participation of many different municipal departments. By revealing how different works of the same type vary in process and the design tools used, the Toolkit evidences that there is not one single approach but adaptable collaborative methods that respond to the procurement and contextual specificities.

Besides the example of skateparks, collaborative tools are employed in all procurement stages of cooperative housing regardless of their procurement, management and ownership differences – as seen in la Borda (W02, the first prototype where users directly managed the procurement process) and Cirerers (W03, the second stage of cooperative housing, where management was professionalised and the housing cooperative Sostre Civic acted as a non-profit developer) – and Guimerà Senior Cohousing (W04, an example of the private development of a cohousing building for two elderly families). In all of these users became active in the definition of their needs and the strategic frameworks of the buildings, which were followed by co-design workshops to agree on design decisions (for example the importance of shared spaces structured into building spaces, or environmental concerns that defined passive energy strategies using sustainable construction methods). In all cases residents performed a certain degree of co-construction at different levels: in the case of la Borda in relation to common areas, in Cirerers to make final adjustments, and in Guimerà more extensively, given the carpentry skills of the residents. Finally, in all of these projects users agreed to develop a post-occupancy evaluation in which architects offered post-occupancy technical support.⁷¹

However, the different frameworks resulted in a different number of collaborative tools employed in each phase responding to project specifics (Figure V-8). First, given the larger size of the community resulting in a more complex project, la Borda (28 housing units) and Cirerers (32) employed more collaborative tools than Guimerà (2). Second, it impacted on the project framework: in la Borda the community was a pre-existing one, but the plot had to be negotiated with the municipality; in Cirerers, Sostre Civic housing

⁷¹ In the case of Cirerers, when PAR workshops took place the post-occupancy evaluation was scheduled but not developed yet.

cooperative acted as an umbrella non-profit developer, the plot was acquired through a public competition and the community was not as cohesive as in la Borda; and in the case of Guimerà the plot and the community pre-existed.

W02 LA BORDA COOPERATIVE HOUSING

COLLABORATIVE TOOLS

- M32** Process management > Involving decisive partners
La Borda emerged from Can Batlló grassroots movements' historical claims. An agreement with the municipality in 2014, under Xavier Trias' government, became the starting point.
- G21** **G22** Data gathering > Diagnostic workshops + Meetings with stakeholders
It allowed dwellers to gain a basic technical knowledge, spatial understanding and vocabulary on architecture. Activities included explanations by architects and users' redrawing of their houses. The 'architecture workshop' of la Borda, formed by future dwellers, acted as a mediator between teams of technical staff and the general assembly of the cooperative.
- C23** **C24** Projective cartography > User's needs (I): individual + User's needs (II): collective
Interviews allowed to determine users' specificities at a level of household needs, energetic performance, and financial situation.
- A21** Analysis & Strategy > Financial analysis & co-finance strategies
Interviews allowed to determine the users' financial situation. As a key strategy, a campaign to co-finance the building allowed its feasibility.
- A31** Analysis & Strategy > Strategic action plan
Driving ideas were collectively defined as guidelines to be followed throughout the process.
- D11** Design > Co-design workshops
Including from general activities, such as imaginary pin-up, to specific ones, such as working with models and plans.
- D21** **D22** Design > Enabling: user appropriation + Enabling: user manipulation
Users operate the greenhouse covering the central patio. In addition, the soft facade allows user appropriation and manipulation, and corridors are designed to be appropriated by users.
- D23** **D41** Design > Enabling: adaptable floorplans + Legislative blind spot
Interchangeable rooms between units are registered as collective spaces, a naming responding to circulation spaces. With that strategy, rooms are not bound to specific dwellings.
- D24** Design > Systemic variations
Housing units are defined as S, M, L sizes to accommodate different household sizes, not determining the composition.
- D25** Design > Multiple scenarios
The generosity of the room sizes allows a number of different subdivisions to respond to different potential users' needs. In addition, certain rooms can change access between adjacent dwellings.
- E22** Execution > Recycling & reclaiming components
Certain elements such as the pavement in the shared kitchen of the groundfloor is built with leftover CLT wood from upper floors construction.
- E33** **E35** Execution > User to complete + Collective assisted DIY-DIT
Some parts of the building were self-built by dwellers and sympathisers of the project. In addition, certain elements were finished by dwellers during inhabitation, to save costs.
- P12** Post-occupancy > External evaluation: stakeholder review
The commission of architecture developed process review workshops, which included a process review diagram.
- P13** Post-occupancy > Internal evaluation: tools & methods
La Borda was analysed as part of the larger social struggle of Can Batlló, including stages and activities.
- P21** **P22** Post-occupancy > Post-occupancy technical support + Building monitoring
Architects met residents regularly and carried out accompaniment tasks during inhabitation. In addition, the energetic performance of the building is being monitored.
- P31** Post-occupancy > Manuals & toolkits
Lacoi published two books about their experience: Building Collectively (2018) and Habitar en Comunitat (2018, co-authored with La Ciutat Invisible).

W03 CIRERERS COOPERATIVE HOUSING

COLLABORATIVE TOOLS

- S21** Public plots competition for cooperative housing in 2017
Sostre Civic as a cooperative with a technical team that included Celobert as architects was awarded for the Cirerers street plot in the competition organised by the municipality. Sostre Civic operated as procurement self-managed agency, including process management roles, calendarisation and setting financial strategy.
- G22** Stakeholders > Direct invitation
Dwellers are members of the Sostre Civic cooperative, who contacted potentially interested users through their internal organisation media.
- G22** Data gathering > Meetings with stakeholders
The diagnosis phase included meetings with different stakeholders, neighbours and future dwellers.
- C16** Projective cartography > Neighbourhood
A study of uses of the groundfloor of the neighbourhood determined the needs that Cirerers could respond to.
- D11** Design > Co-design workshops
Around 10 workshops were organised during the design phase across all scales of the project, from general materialisation to specific ones, such as installations. Debates were alternated with questionnaires aiming to reach agreements by consensus. For the distribution of the specific dwellings, one to one meetings with dwellers were organised.
- D21** **D22** Design > Enabling: user appropriation + Enabling: user manipulation
The building encourages manipulation of certain elements with a soft balconies facade and shared spaces. In addition, each 'street-landing' is self-managed by the neighbours of each floor.
- D42** Design > Camouflage
Several design decisions allowed to dodge regulations, which limited design possibilities. That is the case of the community kitchen at the 6th floor, to be installed in a post-occupancy phase. Another example is the duplicity of kitchen air extraction system: a conventional one (cooperative) and a kitchen hood with carbon filter. As a third example, a community-shared room in the groundfloor was declared as the normative residues room.
- E33** Execution > User to complete
The limitations of Spanish regulations induced the building to be built through professional construction. However, users were encourage to complete the construction according to their needs.
- P12** **P13** Post-occupancy > External evaluation: stakeholder review + Internal evaluation: tools & methods
Both external evaluation with stakeholders and internal one about tools and methods are planned.
- P21** Post-occupancy > Post-occupancy technical support
Workshops with users and instructions for introducing dwellers to the heating water system and double-flux ventilation system.
- P22** Post-occupancy > Building monitoring
Including environmental systems and indicators.

W04 GUIMERÀ SENIOR COHOUSING

COLLABORATIVE TOOLS

- G22** Data gathering > Meetings with stakeholders
To determine their needs, desires and preferences.
- C23** **C24** Projective cartography > Users' needs (I) individual + Users' needs (II) collective
Habits are analysed as framed by daily schedule and spatial needs, and whether these take place individually or with a certain degree of collectivity.
- D11** Design > Co-design workshops
To analyse needs, from which cartography derived. In addition, co-design workshops enabled a joint discussion between architects and dwellers.
- E32** **E35** Execution > User to execute + Collective assisted DIY-DIT
Dwellers executed carpentry elements and wooden furniture during construction stage, with the technical assistance of architects.
- E33** Execution > User to complete
After occupation, dwellers completed the non-essential parts of the building.

Figure V-8. Comparison of collaborative tools employed in the three housing projects analysed: la Borda cooperative housing of (W02), Cirerers (W03) and Guimerà Senior Cohousing (W04). The full analysis can be found in Annex 3.

In contrast, when defining the case studies of this research, no examples of public housing developed through a public development agency employing collaborative design tools were identified.⁷² As a practitioner, during the period 2016-2022 I participated in a total of 22 public competitions (most of which were with Llardarquitectura), organised by different public developers of social housing (IMHAB, IMPSOL, INCASOL and Prat Espais), facilities (BIMSA, Infrastructures.cat) and local municipalities (Arenys de Mar).⁷³ Except for La Quinta Força cooperative housing, in which the developer was the cooperative and not a public agency, none of them included, or anticipated using, collaborative design methods. The most they did in this way was to present as programme requirements the conclusions of a so-called ‘participative process’; since these processes did not entail a continuous collaboration between stakeholders throughout the architectural project but only a one-off non-binding consultation (falling into Arnstein’s (1969) category of “tokenism”), I did not consider them as relevant case studies for this research.

Public agencies in charge of developing new buildings seem less keen to rethink their procurement methods to include users in the process. On the contrary, they do so in the case of the transformation of existing facilities or heritage buildings claimed by a pre-existing community of users and potentially

⁷² APROP included tools to address the environmental dimension of the project during construction and use, but users were not involved in procurement.

⁷³ The briefs and information presented to competition participants can be checked in respective sections of Catalan website for public tendering “Perfil del Contractant”: <https://contractaciopublica.gencat.cat>. Accessed 15.05.2022. The reference codes for the public competitions records are the following: IMPSOL: Exp. 155/17, Exp. 78/18, Exp. 166/18, Exp. 75/2021 (Lots Sant Boi i Viladecans). INCASOL: Expedient 2018_057, Expedient 2018_056, Expedient 2018_055, Expedient 2019_20023, Expedient 2019_5, Expedient 2020_31, Expedient 2020_34, Expedient 2019_20026, IMHAB: Exp. 78/18 (La Quinta Força). BIMSA: Nº EXP. 240.1619.157 LOT NÚM. 2, EXP.113/19 LOTS A i J. Infrastructures.cat: CAP-19216, CAP-18341, CAP-18349. Ajuntament d’Arenys de Mar: 2019/3383. Prat Espais: 21-421-DOT1.

also with the objective of improving conventional procurement methods. Case studies analysed range from publicly owned and community-led – Warehouse 11 (W09), Coopolis Phase 0 (W10) and la Escocesa Warehouse L (W13) – to the transformation of existing facilities by public departments – Pere Grau Space (W15), Coeducative Playgrounds (W16) or la Santa Urban Sports Park (W19). In all of these users were included in the process from the initial diagnosis phase, the taking of strategic decisions, and co-design through a series of workshops to achieve design consensus. Additionally, some of them included users during construction at different levels of intensity when tasks did not require a degree of professional knowledge (meaning dangerous operations on load-bearing structures, or the employment of advanced professional tools). Collaborative methods were adapted to the audience for each project in its different phases. For example, Warehouse 11 (W09) was developed by the neighbourhood association of Can Batlló (leadership, management and non-infrastructure construction works) in agreement with the municipality (ownership and development of infrastructure works). Likewise, la Santa Urban Sports Park (W19) mixed professional works (for excavation and the construction of the concrete skating bowls) and user construction (for skating obstacles, furniture and gardening). Coopolis Phase 0 (W10) and Pere Grau Space (W15) were co-designed but built with a professional construction company given the complexity of the work. Given that participants in Coeducative Playgrounds (W16) were primary school children, co-construction was limited to mural painting workshops.

PROJECT OPPORTUNITIES

The inclusion of civic engagement in decision-making and urban governance is challenging the distinction between institutional and associational forms of politics. Analysed case studies demonstrate that allowing civic groups to lead

urban transformation processes produces results unachievable by the municipality on its own since they result from users' commitment, as discussed below. Likewise, these citizen groups would have struggled to achieve the results without municipal support in the form of access to land, direct or indirect financial support, and in some cases adaptation of legislation. Despite having different project triggers and leaderships, all the projects required collaboration between the public and local communities, and in some cases also private stakeholders. As a result, most of the case studies do not fall strictly into either community or public procurement but are hybrids, framed by a public-community partnership that avoids them falling clearly into the category of either “top-down” and “bottom-up”.

In these processes, public and community stakeholders take variable roles, such as leadership, funding, and maintenance, depending on the specific context of a project. Two features create opportunities given the overlapping of stakeholder roles (as discussed in Chapter III, Figure III-17): the first are different kinds of leadership, which has an impact on project priorities and questioning decision-making. Second, the fact that phases are not considered autonomous – as they are in public procurement, where phases are typically allocated to different administrative departments – nor assigned to specific stakeholders, but there is instead an overlapping of stakeholders – management team, developers, and users – that opens the door to negotiation between them to incorporate each other's point of view. This enables end-users to take design risks in order to gain long-term benefits. While community-led projects are collaborative by nature, the challenge is to encourage collaborative practices in public and private procurement.

Design opportunities and the benefits of collaborative practices are grouped in the following discussion into key procurement stages: leadership,

process management, the diagnosis phase, the proposal phase (including strategy, design and execution), and post-occupancy.

The first key parameter that frames design opportunities is process feasibility: that is, addressing the question of whether a certain project is suitable, or even desirable, measured against what stakeholders consider necessary and/or urgent; this inevitably embodies social and economic concerns. Most commonly, public development occurs as a result of a political party's identification of priorities and needs. Similarly, private investment most commonly is driven by financial interest. The inclusion of users (by invitation or resulting from grassroots activity) challenges the framing of what is considered a problem and the available tools for. Examples are Can Batlló Complex (W08) and the resulting projects (Warehouse 11, Coopolis Phase 0 and Arcadia School), the recovery of la Escocesa Warehouse L as artists' studios (W13), and the citizen space (e)co Platform (W14). All of these emerged as community demands, were developed through a municipal-community partnership and are operating as self-managed facilities. This collaboration made them possible both in terms of the construction/adaptation of the building and the local impact in the form of the local provision of public/community services. Although the respective municipalities could have built the buildings as infrastructural projects themselves, none of them were planned and probably would not have happened solely as municipal initiatives. Additionally, there is a significant difference between services that are publicly offered and ones that are provided by the community itself, since in the second case there is a local identification of needs and local ways of addressing them, as opposed to a standard public provision of services regardless of the specific urban and social context.

The emergence of cooperative housing in Barcelona – which includes la Borda (W02), Cirerers (W03) and la Quinta Força – is also a remarkable

example of a municipality-community partnership. For their part, the municipality offers the land, and sometimes fundraising assistance. The housing cooperative, on the other hand, assumes responsibility for affordable housing provision (in Spain this has traditionally been solely the duty of local government). As a result, both partners benefit from having a greater impact on the procurement of affordable housing than the municipality could accomplish alone. Additionally, the involvement of users in management and direct decision-making, as part of the housing cooperative's understanding of direct democracy, opens up design opportunities at different levels, as discussed below.

However, less common private-community partnerships can also result in mutual benefit. An example is the case of La Comunal, an old industrial building belonging to a private real estate developer that currently hosts eight workers' cooperatives in Sants neighbourhood. As the building was listed and a housing (speculative) development unfeasible, the owner considered refurbishment through a cooperative project as an opportunity, which in turn allowed the cooperatives involved to gain a shared working space. The transformation of the privately owned building in 2019 was financed by the owner but co-designed by the workers' cooperatives, with Lacol as the architects who are also one of the workers' cooperatives hosted in the space.

The second key parameter is the management and leadership of the procurement process. A comparison of *Agrupacions Tàctiques de Repoblament Includiu* (ATRI, Tactical Accommodations of Inclusive Repopulation) and *Allotjaments de Proximitat Provisionals* (APROP, Proximity Provisional Lodgings) (both in W01) reveals the opportunities and limitations that emerge when the same system is adapted to two different forms of procurement (community-led in ATRI's case and public-led in APROP's) and users (long-term and short-term, respectively) (Figure V-9). ATRI is both a strategy to fill

urban voids and an affordable self-managed housing model based on a Community Land Trust that instrumentalises affordable housing for urban improvement at different levels. Rather than just producing a building, ATRI creates a social impact at a local scale with the inclusion of a non-profit local association as a developer partner, redistributing the economic impact of construction costs to “small hands” rather than major companies,⁷⁴ and involving users as part of the management, ownership, co-design and co-construction process. APROP emerged from the adaptation of ATRI into a municipality-led process as a new model of emergency shelters with an unprecedented experimental character in comparison with typical public housing buildings. This is first seen at a regulatory level, since they are built on land that is not earmarked for housing but for public facilities – responding to the lack of available land. Second, they employ the reuse of shipping containers, allowing the construction to be done industrially, shortening the timescale needed, and reducing the environmental impact.⁷⁵ Third, APROP aims to have a local impact to prevent gentrification by specifically hosting the local population affected by the housing emergency, who would be displaced otherwise.

To compare ATRI and APROP with the cooperative housing model, the diagram in Figure V-9 also includes the housing case studies of la Borda Cooperative Housing W02 in pink; Cirerers Cooperative Housing W03 in blue; and Guimerà Senior Cohousing in green and thus offers a comparison of the new housing model case studies. While ATRI produces a self-managed and

⁷⁴ ATRI aims the distribution of the economic impact of the building’s construction costs through a public competition tendering split (Treatu public bidding system) developed by the Municipality of Pamplona to target small companies and bodies from the Social and Solidarity Economy. <https://sedeelectronica.pamplona.es/FichaTramite.aspx?id=205035VA>. Accessed 01.04.2020.

⁷⁵ As a result of the size of a standard container, the impossibility of fulfilling the minimum dwelling size as determined by the housing regulations (Decret d’Habitabilidad 141/2012, Habitability Decree) forced APROP to be classified as lodgings rather than housing.

community-led building comparable to cooperative housing, in APROP the temporary status of residents result in a more conventional procurement process in which residents are included in neither decision-making nor co-design or co-construction, thus are more limited in the number of options available during the design and execution of the building.

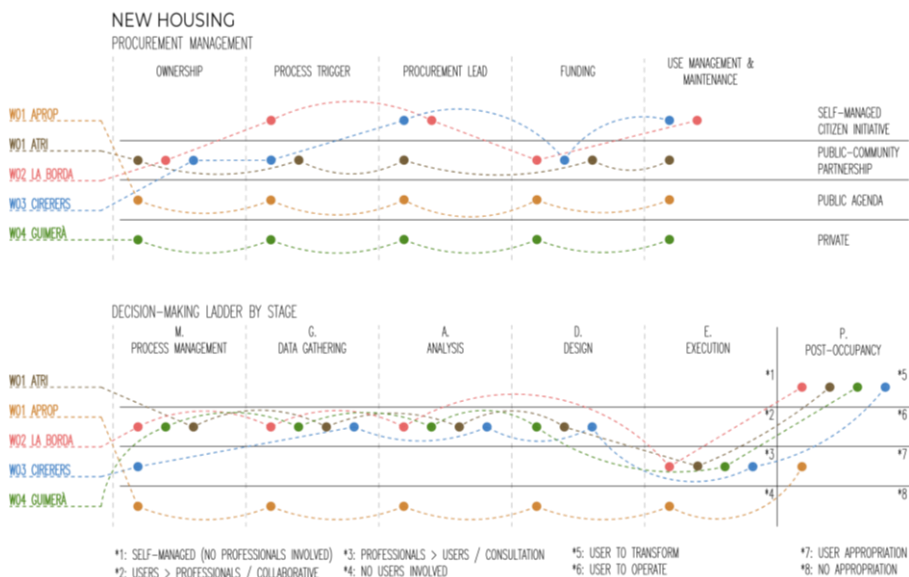


Figure V-9. Comparative analysis of new housing case studies in relation to procurement management (top) and the decision-making ladder (below), including APROP W01 in orange, ATRI W01 in brown, la Borda Cooperative Housing W02 in pink; Cirerers Cooperative housing W03 in blue; and Guimerà Senior Cohousing in green. This figure summarises every case study analysis sheet (Figure 3) resulting from the analysis through tool M32 (Figure V-2).

The *casa-fàbrica* (house-factory) Can 60 (W12) represents an interesting similar case in which different consequences of management policy in public facilities can be observed. Can 60 was an industrial building in Barcelona’s city centre belonging to an international real estate investor who intended to demolish it to build luxury tourist apartments. This situation prompted protests

by the local associations hosted in Can 60,⁷⁶ supported by other bodies,⁷⁷ among which was AC who offered technical and architectural support. The demands for the preservation of Can 60 included both the building, as part of the historical heritage of the city at a very specific moment of its industrial development, and the associations that inhabited it, emphasising their contribution to the identity and culture of the city as part of its intangible heritage. These associations had an impact on both a social and a cultural levels locally and internationally – including, among many others, for example, a capoeira studio that developed a social project with children in a socially complex neighbourhood, a foundation that provided social integration flats, a photography studio that included one of the most extensive libraries on photography and that developed research into daguerrotypes and an art studio that developed international exhibitions.

After a year of negotiations, when the building was acquired by the municipality to preserve it and turn it into a civic centre, Can 60 shifted from private ownership and community-led demands to both public leadership and ownership (Figure V-10, Can 60 in pink). Unlike other cases such as Warehouse 11 (W09, in brown) or Coopolis (W10, in orange), as projects that the municipality understood to be exceptional in resulting from social struggles and thus requiring bespoke management, the transformation of Can 60 from a hub for local associations and entities to a public civic centre was dependent on standard public procurement through the public agency Barcelona d'Infraestructures Municipals (BIMSA). Unlike the Warehouse 11 and Coopolis cases, the development carried out through standard procedures focused on

⁷⁶ In 2015, associations hosted in Can 60 included: Capoeira Canigó, Factoria Heliogràfica (photography studio specialised in daguerrotypes), Posada la Europea, Estaca and AM, (art workshops), R20bis (bike workshop), Apip foundation (social integration flats), la Poderosa (dance studio), Can Fanga (ceramics workshop), and dwellers in 10 flats.

⁷⁷ Sostre Civic housing cooperative, Tot Raval, Fundació Arrels, Impulsem.

preserving the building rather than its social, cultural and identitarian dimension, overlooking the impact that users and associations based in the specific neighbourhood play. Community architects involved in the claims for preservation were excluded from the process of transforming the building by the organisation of a public architectural competition with strict entry requirements in 2018. Likewise, the municipal government undervalued the contribution of the associations and bodies involved in the campaign for the preservation of the building, leaving most of them out of the future building.

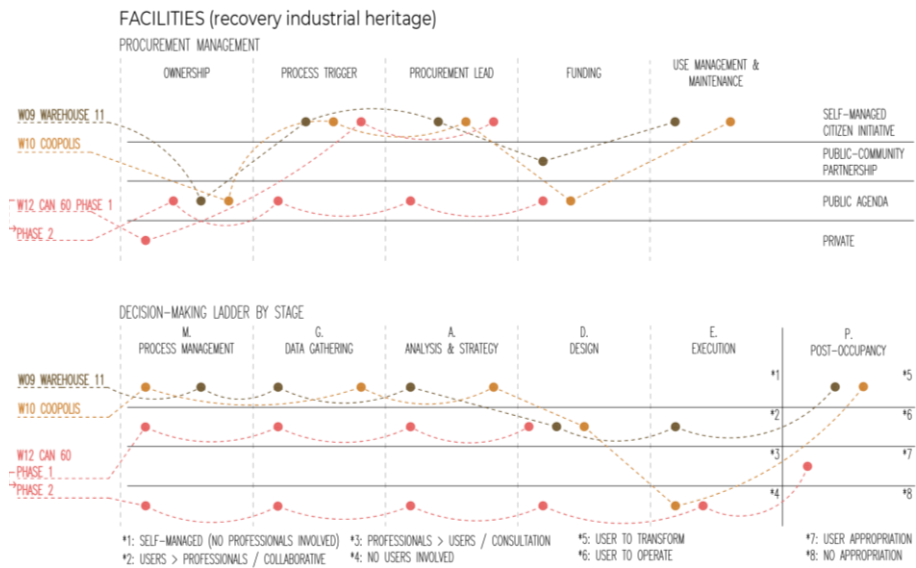


Figure V-10. Comparative analysis of facilities case studies concerning procurement management (top) and the decision-making ladder (below).

A different understanding of the role of current users in the transformation of existing facilities is exemplified by Coeducative Playgrounds (W16), where the Municipality of Santa Coloma de Gramenet and Àrea Metropolitana de Barcelona (AMB) transformed six school playgrounds including the educational community, composed of teachers, students, families and non-teaching staff.

Both the school community and the collective Equal Saree jointly analysed the space of the playgrounds, reflected on gender equality, cooperation and inclusive values, imagined ideas for improvement and, finally, agreed on proposals to realise. Coeducative Playgrounds (W16) evidence how a co-design process can be developed in the transformation of public facilities, although needing to be adapted regarding specific building details (Figure V-11).

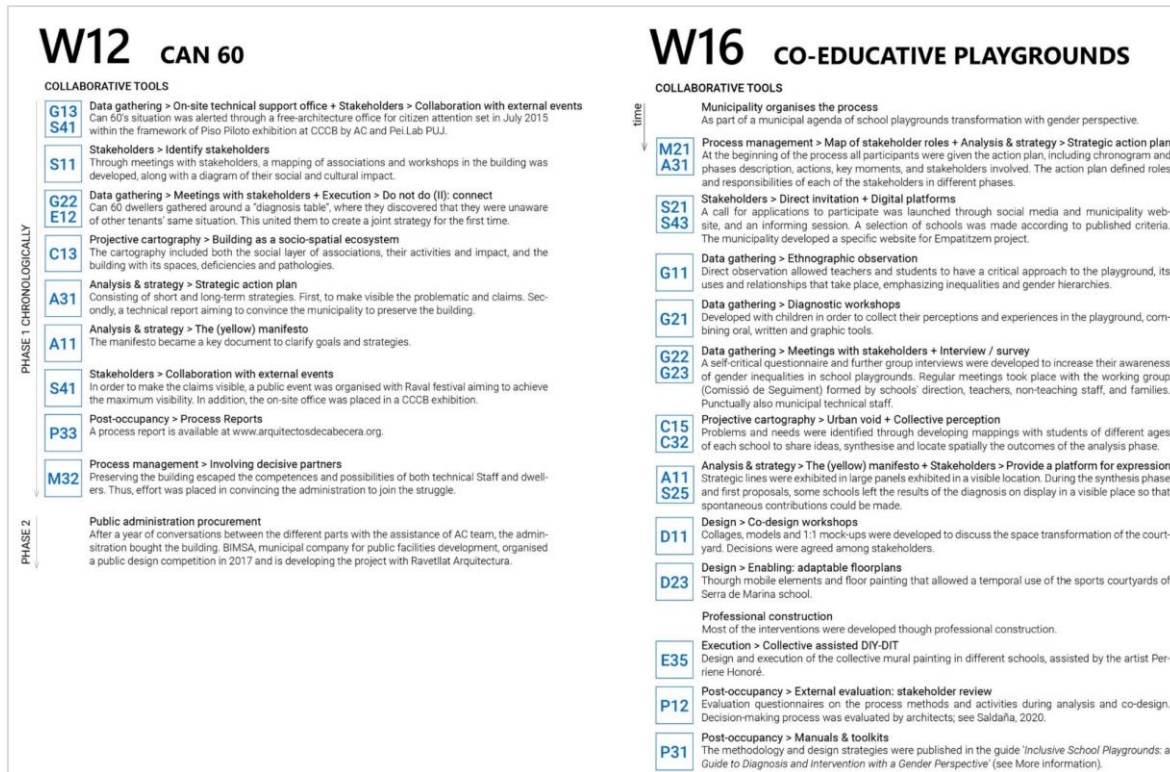


Figure V-11. Analysis of collaborative tools employed in Can 60 (W12) and Co-Educative Playgrounds (W16). In Can 60, collaborative tools are developed in the first phase and discontinued during the second public-led one, while in Coeducative Playgrounds collaborative tools are included in all the procurement phases. The whole analysis can be found in Annex 3.

As a third parameter, for the diagnosis of the existing context the elaboration of the design question becomes the most important issue. The framing of design problems is fundamental for the design outcome: poor urban and architectural interventions are often the result of an insufficient understanding of the problem and context rather than bad design (Bilbao and Avilla-Royo, 2019). In public and private procurement, this is addressed by developers setting a brief or a programme of needs that is presented to designers. Most common publicly led housing and facilities procurement uses architecture competitions in which the brief is designed by planners, architects and engineers working for public agencies operating as ‘stand-alone experts’. Public agencies propose standard spatial solutions – as evidenced in housing standard design manuals (for example Ajuntament de Barcelona and Patronat Municipal de l’Habitatge de Barcelona, 2019; INCASOL Institut Català del Sòl, 2019) or public facilities and services (for example, Generalitat de Catalunya, Departament d’Ensenyament, 2016) – targeting standard citizens as users. In the case of housing, this is premised on the nuclear family as a crucial life stage (as opposed to a personal option) as defined by regulations and evidenced in how the terms “family” and “marital double bedroom” are employed in the Metropolitan Building Ordinances (Àrea Metropolitana de Barcelona Mancomunitat de Municipis, 2009, Art.56 and Art. 62-64).

In contrast, collaborative methods enable designers to ask users directly about their needs and preferences in a reciprocal conversation that will have an impact in further phases. The cooperative relationship between developers and users from an early stage in the best interests of both the municipal administration or public developer and the users, and produces a short-term benefit of addressing users’ specific needs and a long-term benefit in the care and appropriation of buildings, as discussed by de Carlo (2009, p.16).

The opposite can produce unwelcome results: the masterplan for Safaretjos neighbourhood (W23) was blocked due to protests by residents. Interestingly, neighbours opposed the municipal plan not because of the programme, which included an increase in housing units in the neighbourhood and was perceived as beneficial for the area, but because of its location and the form that it was to take (Figure V-12, left). A joint diagnosis phase may have prevented this by seeking consensus on the overall aims of the urban transformation. As a response to both municipal programming requirements and residents' preferences, AC developed an alternative masterplan (Figure V-12, right), although this had never been considered by the municipality, that distributed new housing units to strategic areas: vacant land, tops of buildings that regulations allowed to increase their built surface, and the perimeter of a park which was perceived as unsafe (new housing units would provide “eyes on the street”, in words of Jane Jacobs (1961). Additionally, spreading newcomers throughout the neighbourhood would have prevented an urban zoning between the new and existing both communities and buildings. In contrast, the management of the masterplan and the multiple properties involved would have required more resources during the planning and management stages.



Figure V-12. Masterplan for the Area Residencial Estratègica (ARE, Strategic Residential Area) of Santa Coloma de Gramenet. Two urban forms of growth emerge from two different design questions. On the left, the official masterplan was developed by the municipality in 2009, and blocked due to residents' protests. Right: proposal by AC after a joint diagnosis with the community, redistributing the

same amount of housing units in strategic spaces rather than concentrating them in the river-front. Source: AC Archive.

The proposal phase includes the definition of the strategy on how to address the problems identified in diagnosis phases, design, and its execution (if necessary). In these three intertwined steps, priorities are defined not only in terms of strategy but also in terms of the degree of experimentation desired and financial preferences in construction, materiality, typology, and environmental terms. Public and private developments tend to be conservative in this regard. This is most evident in housing developments. Public procurement typically avoids material experimentation to avoid the risk of being accused of the mismanagement of resources and preventing critique of unusual typological solutions. It views shared spaces as an unnecessary cost and a problem to manage, and a source of potential conflict between residents. Likewise, private developers tend to minimise risks by selling an already established, marketed product. In contrast, the collaboration between residents and designers challenges existing standards, in terms of both design and economic and social schemes, to better fit their needs. Following the example of housing, in the cooperative buildings of la Borda (W02) and Cirerers (W03), users chose a more expensive wood CLT structure over concrete solutions as a result of their environmental priorities over economic ones. Similarly, in both projects users decided to prioritise investing in larger shared spaces rather than maximising private domestic space (Figure V-13). Sharing certain areas is a strategy for both improving efficiency – for example having half a dozen shared laundry machines rather than a single one for each dwelling – as well as offering the opportunity to qualitatively improve their houses by enjoying common spaces that are not normally shared, such as guest rooms, shared kitchens or multi-use spaces. This attitude reveals occupants' understanding of their house as a space that extends

beyond the private space: the building as a single social and architectural project – rather than as the conventional addition of autonomous flats framed by a single property. This approach requires the commitment of the residents in the management of the space, agreed during the design phase and evidenced during post-occupancy.

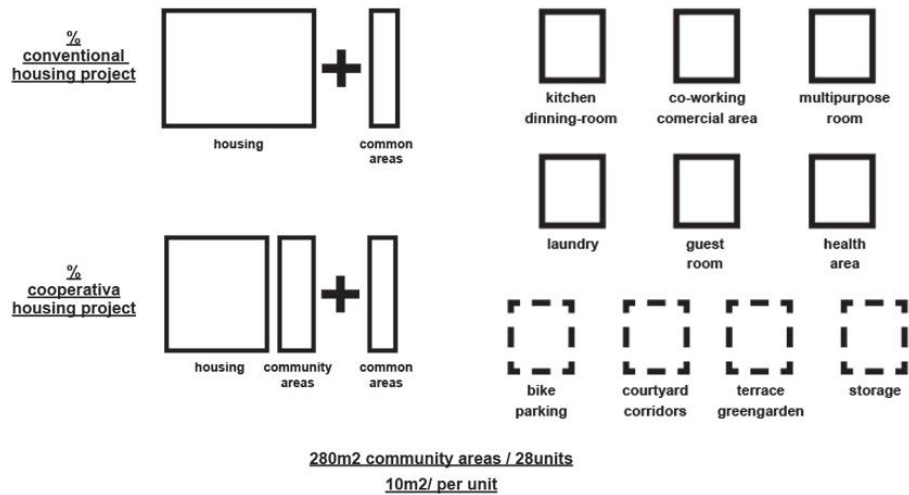


Figure V-13. Shared spaces in la Borda cooperative housing (W02). Left: comparison of space uses and ownership of la Borda in relation to conventional housing projects. Right: list of unconventional shared spaces included in la Borda. Source: courtesy of Lacol.

Interestingly, cooperative housing experimentation has had an impact on public housing procurement, for example in the case of CLT structures in affordable housing after the example of la Borda.

Beyond defining priorities or assuming a degree of experimentation, residents may contribute with specific proposals or design solutions. During the PAR workshops, David Juarez from Straddle3 acknowledged the positive impact of users as design informants, for example in including skateboarding obstacles

(central pyramids) originally rejected by the architects in both la Santa Urban Sports Park (W19) and Moviment Obrer Square (W20), or in the case of the latter users' proposal of a shady pergola rather than the trees suggested originally by architects. Another example is La Quinta Força cooperative housing, which I co-authored (see Annexe 2). At the typological level, the building included a significant number of common areas and the circulation space was generous. Residents also agreed on material and construction experimentation: the building is designed with load-bearing structures (as boxes) in wood and has a green east façade that functions as a building-scale phytodepuration of greywater, enabling its reuse and potentially disconnecting the building from the city's sewage network. A single ownership of the building and the layout of the load-bearing boxes allows the physical boundaries of the building and the number of rooms of each unit to be altered, increasing some and decreasing others, or even enabling the building to change from nuclear units to extended household units or cluster living, through the lifespan of the building. All these proposals emerged from the designers team and were welcomed by the community. In parallel, users suggested unexpected design opportunities concerning the definition of spaces and commitment to further management and maintenance, which were incorporated into the design as requirements. Examples of this are the definition of shared rooms for domestic labour activities, fostering biodiversity in the building, and including a dimension of the collective memory of the neighbourhood in the naming of areas and historical large-scale images across the building.

User commitment during co-design may result in their involvement in the execution phase, which is exclusively by skilled builders in public and private procurement. In collaborative architecture, users can take different roles as executors, ranging from following given instructions (tool E32, Figure V-14, top left), completing an unfinished design and providing its final form and

appearance (E33, Figure V-14, top right), or expanding an existing structure (E34, Figure V-14 bottom left). Interestingly, John Turner (2018) differentiates between three types of self-construction – spontaneous, directed and assisted – resulting from his study of informal settlements in South America. While the spontaneous type takes place without professional help and thus may suffer from design and construction problems, the directed kind is framed by the means, organisation and management of municipal administration, thus reducing residents to workers with no agency in decision-making. The third type of assisted self-construction (E35, Figure V-14 bottom right), provides the means and technical assessment while giving responsibility for development to residents.



Figure V-14. Four tools of the Toolkit that refer to user involvement in the execution phase and that entail different relationships between users and the architectural work, left to right and top to bottom: user to execute (E32), user to complete (E33), user to expand (E34) and, intersecting them, collective assisted do-it-yourself (DIT) and do-it-together (DIT) (E35). For larger images see the Toolkit.

According to Turner, assisted execution encourages initiative-taking in residents and allows a better response to users' needs, while understanding housing as an open system of continuous development. If developed collectively, the benefits include community cohesion and care for what has taken a communal effort to build, the strengthening of local mutual support between residents, and an opportunity for peer learning. This was acknowledged by designers during PAR in the cases of the Sk8+U (W18) and la Santa (W19) skateparks (Straddle3), as well as the Warehouse 11 (W09) facility and Guimerà Senior Cohousing (W04, Arqbag). Additionally, it enables a enabling a better understanding of the building for further maintenance, improving construction skills, gaining a better understanding of how cities are built.

Co-construction also represents an opportunity to save on construction costs. The risk here is that in publicly led projects voluntary work is assumed as a given, rather than construction being an institutional responsibility. In some cases, such as la Escocesa Warehouse L (W13), Sk8+U (W18) or Arcadia School (W11), the lack of public funding means that voluntary work is the only way in which it is possible to develop the project. More interesting, though, are cases in which construction work was undertaken by a mix of professional and users since they entail the benefits of users carrying out construction with the support of public funding that guarantees its feasibility. Examples of this are la Santa (W19) – where the construction made the most of two construction logics: professional construction for elements below ground (skateboarding bowls), while above-ground elements and obstacles relied on users – and Warehouse 11 (W09), where the infrastructural work relied on the municipal government through Barcelona Activa as a public training agency, and the allocation of the space to Can Batlló association. The case study of ATRI (W01) offers an interesting mix of professional and user construction, in which the process of execution is a project in itself. It is divided into three phases: a “black stage”,

involving prefabrication in a professional workshop; a “grey stage”, involving on-site construction with local professionals and assisted “do it with others” (DIWO); and a “white stage” involving self-construction and “do it yourself” (DIY).

In parallel, these projects highlight a strategising of material reuse. While often resulting from a lack of funding and resources, it is also developed as part of environmental agendas to reduce construction impacts.

Finally, the post-occupancy stage reveals the outcomes of collaborative methods employed during procurement. The responsibility for maintenance of the space is directly linked to ownership, whether this is private, public or collective. However, Wates and Knevitt (1987) noted that people engaged in procurement are also willing to participate in management and maintenance, which in turn has an impact on people’s pride in their built environment. Can Batlló (W08) or the cooperative housing projects evidence the continuity between a social demand, the effort to materialise the struggle into a specific architectural project, and users’ commitment to the maintenance and management of the space.

The post-occupancy stage also offers crucial opportunities that are often overlooked when the building is considered “finished” in construction terms. In public buildings, this often entails a shift from the public agency that developed the building to the one that will operate it, for example from BIMSA or Infrastructures.cat to the Catalan Health or Education departments. In the case of private procurement, it might shift to new owners if the asset is sold. A common conclusion from all the case studies is that there is an overall lack of a systematic post-occupancy evaluation (POE), which can produced learnings that are overlooked when post-occupancy is reduced to building management.

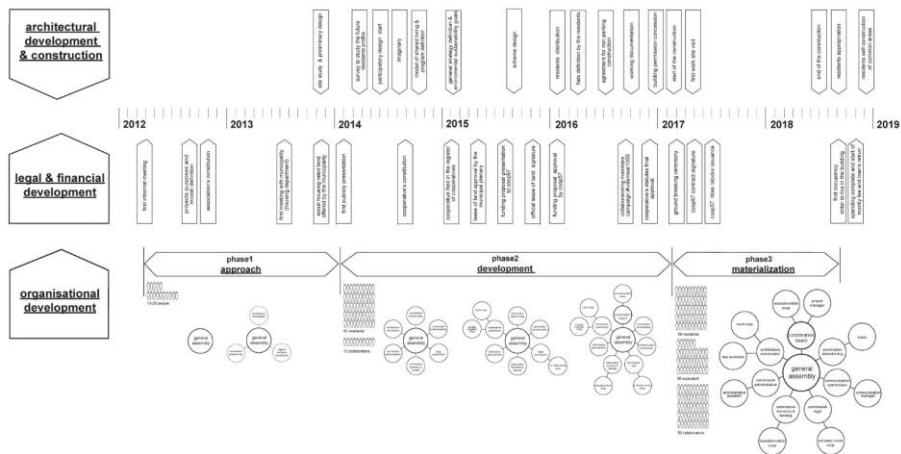


Figure V-15. Evaluation of the procurement process of la Borda (W02) developed in the post-occupancy stage, showing in parallel relevant events concerning architectural development and construction (top row), legal and financial development (middle) and the evolution of the group, including the number of residents, their organisation in working groups and external technical teams. Source: courtesy of Lacol.

In some cases architects have developed post-occupancy analyses, mostly voluntarily (for example in the case of la Borda by Lacol or Saldaña Blasco, 2021) (Figure V-15), which learning are shared through books (for example Lacol, 2018; Saldaña et al., 2019). This fact is a departure from the way in which older generations of architects in Barcelona documented their practice – they described the work itself, but not the managerial or decision-making processes that created it, as these were not considered part of the architectural project.

Evaluating the procurement process plays a crucial role in knowledge transfer of the social dimension of the process linked to the evolution of its design, and the improving design methods and decision-making protocols and procurement.

Figure V-16 summarises the main POE methods and a bibliography, organised in columns according to whether they were undertaken externally by

stakeholders who participated in the process or internally by professionals, in relation to the tools and methods employed, and in rows according to whether it refers to the process or to the post-occupancy spatial performance. POE tools can be found in section P1 in the Toolkit, some of which are shown in Figure V-17.

	<u>Internal Evaluation</u> (only professionals)	<u>External Evaluation</u> (participatory methods including users)
The procurement process, design methods and specific activities	<p>P13. Internal Process Evaluation (P13, Figure V-17 bottom left) (Raons Públiques, 2018; Saldaña Blasco, 2021, pp.262–264)</p> <p>P14. Evaluation indicators review (Figure V-17 bottom right)</p>	<p>G23, P12. Survey / Interview (Figure V-17 top right) (Wates, 2000, p.171; Khajehzadeh and Vale, 2015)</p> <p>G22. Meetings (Sánchez Alonso, 1986)</p> <p>M33. PAR discussion workshop (Kindon, Pain and Kesby, 2010)</p>
Post-occupancy spatial performance	<p>G11. Ethnography (Arnold and Graesch, 2002; Arnold et al., 2012).</p> <p>P14. Evaluation indicators review (from Analysis Phase, Figure V-17 bottom right)</p> <p>C. Cartography review (from Diagnosis Phase).</p>	

Figure V-16. Summary of the main post-occupancy evaluation (POE) methods. The columns indicate whether these are developed by professionals or through participative methods. The rows show whether it refers to the procurement process or to post-occupancy spatial performance. In brackets, the codes refer to Toolkit tools. Bibliographical references include discussions and examples of the methods.

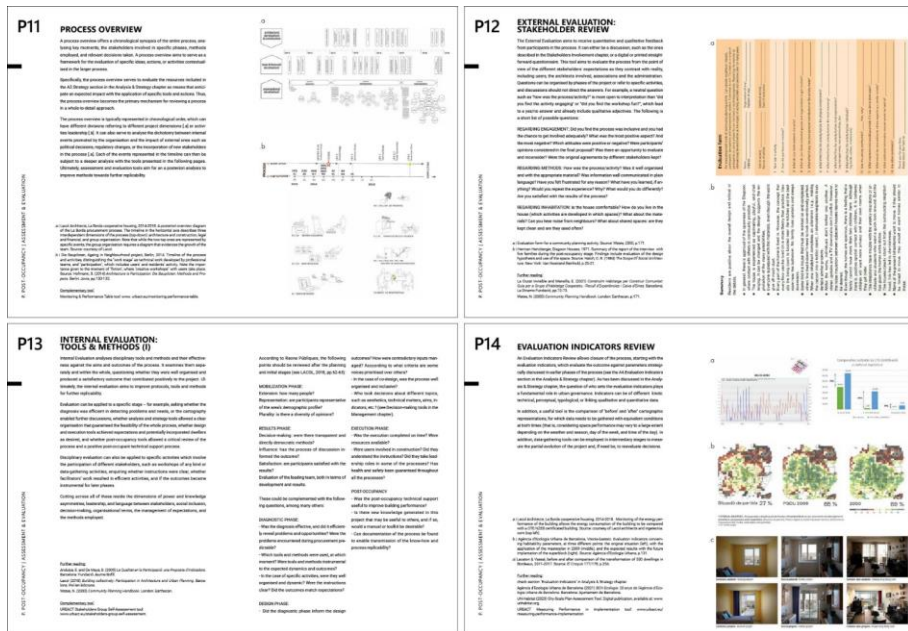


Figure V-17. Four tools of the Toolkit concerning post-occupancy assessment, left to right and top to bottom: process overview (P11), external evaluation with stakeholders review (P12) which can be developed through discussion workshops (M33), internal evaluation of tools and methods (P13) and evaluation indicators review (P14). For detailed information and larger images see the Toolkit.

An internal evaluation (Figure V-16, left column) may include an assessment of the methods employed and their impact. In addition, an analysis of spatial performance through ethnographic methods allows a direct observation of the interrelationship between the space and the activities developed – ideally the same ethnographic methods employed in the Diagnosis phase and developed under similar conditions, thus enabling a comparison between before and after situations.⁷⁸

⁷⁸ Famously architects Lacaton & Vassal develop before and after photographic comparisons of their projects to refurbish social housing blocks in France.

Second, a POE developed externally with participatory methods (Figure V-16, right-hand column) allows designers (both the management team and architectural designers) to gain direct feedback from users and check whether the design hypothesis worked, whether users kept their commitment or not, and why, offering insights into the way the design of process phases and specific activities could be improved. In public procurement, POE most commonly takes place through surveys, which are limited in scope and do not enable a conversation between users and designers. Complementary methods include meetings or PAR discussion workshops that may enable a more efficient framework to discuss and gain direct feedback.

Finally, POE enables the revisiting of both the Cartography developed in Diagnosis phase and the Indicators established in the Analysis phase (Figure V-16, bottom row), which be developed either by the core management team, or through discussions with other stakeholders. Indicators can be reviewed in relation to the process (for example in terms of inclusivity or representativity of participants) and assessing the aims and priorities that were set and revealing power relations in the decision-making ladder during the process.

Additionally, the post-occupancy technical support by architects to users can also provide an opportunity for architects to clarify or justify design decisions, making them more transparent. In addition, the post-occupancy stage offers the possibility of monitoring different aspects of building performance – for example, environmental efficiency or use intensity. This is evident in la Borda cooperative housing (W02), where the decision to invest in a building-scale greenhouse in the courtyard significantly improved the building performance,⁷⁹

⁷⁹ “Com de sostenible és realment la Bordala Borda?” Available at: www.lacol.coop/actualitat/sostenible-realment-borda. Accessed 25.01.2020.

and the intensity of use of shared washing machines and guest rooms is proving highly efficient.

Finally, and intersecting with all the cases mentioned above, the collaboration between different stakeholders and users during procurement offers an opportunity to influence policies for the mutual benefit, updating regulations that are obsolete or those that were designed for other social or political frameworks. Famously, la Borda achieved a new legal framework for the lease of public land for 75 years (plus the option of a 15-year extension), known as *Dret de Superfície* (Surface Rights), after which both buildings and plots are returned to the municipality. In parallel, the legal definition of *Cessió d'Ús* (Transfer of Use) allows users to inhabit both dwellings and common areas of the building without owning them. La Borda also achieved a change in the regulations requiring the inclusion of car parking in housing, saving costs and promoting the idea of a car-free city. All the cooperative housing projects that were subsequently built in Catalonia benefited from those changes.⁸⁰

Likewise, projects in public spaces or public facilities such as the skateparks or coeducation playgrounds may cause future changes in the procurement protocols of public agencies to systematically include users and local stakeholders in throughout procurement decision-making in a binding and operational manner. However, while community-led projects such as cooperative housing have been able to develop a new bespoke procurement model, since there were no precedents, there is generally a reluctance in public procurement to contemplate change; public space and public facilities projects

⁸⁰ Another case took place few years later: after the first cooperative housing project in Barcelona (prototypes in 2014 and competitions in 2017 and 2020), the 2020 *Decret Llei 50/2020* law included a new legal typological definition of dwellings as “lodgings with complementary common spaces”, to respond to new spatial requirements derived to a great extent from the cooperativist movement.

with public procurement that have been analysed and that incorporate collaborative procurement methods are exceptions in their context.

This raises a twofold question regarding a framework for either encouraging or hindering collaborative design practices and methods. First, how to incorporate collaborative mechanisms in procurement while guaranteeing a satisfactory involvement in decision-making (Mullan, 2005; Díaz García, 2015). In this regard, Matthew Carmona describes how design governance frameworks play a crucial role in how the public sector influences design in the built environment to achieve high-quality design (Carmona, 2016). Such frameworks, summarised in Carmona's design governance toolbox, can be based on both formal tools (regulatory responsibilities of public agencies) and informal ones (discretionary and optional) that can have a direct impact (in terms of products of design) or indirect (in processes of urban design) (Carmona, 2017), both of which can be identified in the form of public-community partnership to a higher or lesser degree in the case studies analysed, as has been described – for example the incentives of the municipality or adapting regulations in the case of formal tool, or through awards⁸¹ and enabling assistance in the case of informal tools. However, the main challenge at this point is to address a shift in the top of Carmona's pyramid (design policy and regulatory frameworks) in both indirect tools (by including collaborative tools in the process) and direct ones (for example setting a bespoke framework for collective forms of living in cooperative housing buildings). Additionally, there is a lack of knowledge and familiarity with the model (informal tools).

⁸¹ AC won the City of Barcelona in 2015 with Can 60 project; Lacol in 2018 with la Borda.

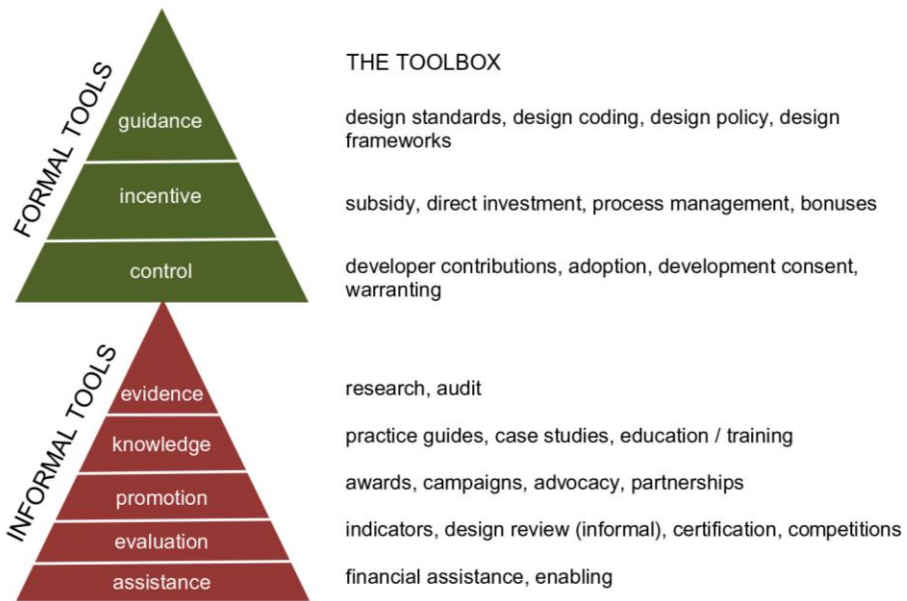


Figure V-18. Matthew Carmona's design governance toolbox (Carmona, 2017).

Secondly, how can projects that allow existing mechanisms to be challenged be enabled with a certain degree of experimentation? Most of the case studies analysed evidence this condition as fundamental; for example the case of cooperative housing on public land that qualifies as *Habitatge de Protecció Oficial* (HPO, Protected Official Housing), *Pere Grau Space* (W15) and *Coeducative Playgrounds* (W16) in relation to conventional refurbishments, or public space in the case of skateparks as opposed to standard mechanisms for public space transformation.

Most of them present a dual condition where developers and management teams had operative autonomy in relation to public agencies (sometimes owners), and a collaborative dependence on municipal administration to guarantee the feasibility of the projects. In the first case, autonomy translates into self-management in relation to procurement, which

results in the bespoke design of the procurement process, enabling the inclusion of users at one or more of the design stages and resulting in the design opportunities above discussed. However, these opportunities could only be materialised with municipal support given either due to social pressure – Can Batlló (W08) or la Borda (W02) with the government of Xavier Trias – or the convergence of the agendas of political parties and grassroots movements – Warehouse 11 (W09) or Coopolis Phase 0 (W10) with the government of Ada Colau, or Coeducative Playgrounds (W16) and Baró Square (W21) with the government of Nuria Parlón in Santa Coloma de Gramenet.

The key question that emerges is how to enable citizen engagement as part of urban development mechanisms – and the experimentation and impacts associated with it – without its institutionalisation, as this would produce two negative side effects. On the one hand, preventing the autonomy of social movements would disable them from challenging administrative decisions and reduce them to mere instruments for legitimising public policy. On the other, it would cause a lack of social engagement, and citizens would again become merely passive receivers of public policies in the long term, as most commonly happens today. This is not to say that self-managed initiatives should replace public provision, but that public provision should not replace community initiatives. A potential approach would be to enable what Hakim Bey (1991) described as strategy to generate autonomous self-governed socio-urban areas on the margins of the state’s socio-political control that suspends regulations to a certain degree, naming these areas Temporary Autonomous Zones (TAZs).⁸²

⁸² Hakim Bey’s TAZ strategy inspired Madrid architects’ collective *Todo por la Praxis* to develop a project based on the construction of an autonomous experimental pavilion and an online archive of self-managed urban initiatives. See Archive TAZ <http://archivetaz.org>; Island TAZ in Luxemburg: <http://todoporlapraxis.es/072-island-taz>, Luxembourg, 2015. TAZ Móstoles, <https://todoporlapraxis.es/078-taz-mostoles>. Accessed 02.02.2020.

Arguably, TAZs exist today and offer a high degree of architectural experimentation. Examples are art and architecture festivals,⁸³ university campuses (Figure V-19), and arts centres. From the point of view of activism, what disappears in these situations are not the actions themselves but the context that makes them potentially threatening in the eyes of the administration, which overlooks their real potential under the guise of another activity.



Figure V-19. *The Bridge of Styx, 1988, Architectural Association, an example of an academic campus operating as a TAZ, allowing a higher degree of experimentation. Source:*

⁸³ Architect and activist Santiago Cirugeda usually benefits from these events as alibis where he can carry out architectural experiments and as a location to explain his alegal – or illegal – “Urban Recipes” experiments. For example, the 2005 prototype Casa Pollo was built in Poblenou under the auspices of the Construmat international construction fair, EME3 architecture festival and APTM Experimental Housing Exhibition. The house complied with operating permits until the municipality understood it was not a piece of art but a real proposal to be replicated as self-built (unauthorised) structures in empty plots around the city. At a certain point it was considered unsuitable for public use, since the staircase did not comply with regulations. Interestingly enough, it was a recycled staircase that had previously complied with the regulations as part of another pavilion that hosted public events. See <https://www.recetasurbanas.net/index1.php?idioma=ESP&REF=2&ID=0012>. Accessed 02.02.2020.

www.collectionsblog.aaschool.ac.uk/bridge-of-styx (Source top left and bottom: *AArchitecture Journal*, Issue 8; source top right: picture by John McMinn).

However, exceptional frameworks for the purpose of experimentation can also happen as an intentional collaboration between local government and designers. The case of the Ringo Rango Route (W22) is paradigmatic: the declaration of a public plot of land as an "experimental campus" by the municipality of Sant Cugat del Vallès (despite the fact that it was not physically near the actual campus) permitted development work to be carried out by non-professionals, including students, who were covered by the university's insurance. The cooperation between the municipality and university temporarily lifted regulations and produced a benefit for both: the improvement of the city on one hand, and the opportunity to develop a learning-by-doing academic exercise on the other.

A similar example in the same municipality is the (e)co Platform, both a result of, and a catalyst for, synergy in the local community, including public and private partners, the neighbourhood and academia. Its nature as a building disconnected from services networks was not considered in any of the regulations applicable at that time. The complicity of the administration enabled to foresee regulatory changes and test building solutions. The disconnection of the building from services networks produced the need to train users, as well as offering the opportunity for building performance monitoring, producing a pedagogical impact on users, municipal workers and architecture students.

On a larger scale, Barcelona's municipal Citizens Asset programme (described in Chapter III) operates under the same logic concerning management, but not so much in the kind of actions and tests that can take place in them. Another example is the case of the of the la Escocesa (W13) creation

factory, in which I was directly involved. In this publicly-owned industrial complex, the inability of the municipal administration to prevent the collapse of the roof of the warehouse Nau Foseco, resulting from austerity measures after the 2008 economic crisis, results in a much higher investment for the years of refurbishment needed – and a loss of heritage. To avoid this situation from repeating, in the nearby Warehouse L, an intervention by AC and the self-managed artists' association of la Escocesa without construction permits allowed the building to serve as a facility for a self-managed artists' association, whose use prevents further deterioration (Figure V-20).



Figure V-20. Left: Warehouse Foseco in la Escocesa industrial complex collapsed in less than a decade due to deterioration derived from unuse, despite an architectural competition was held and the project ready to be built. Middle: Warehouse L of la Escocesa as found in 2019. Right: Warehouse L in 2020 ready for artists to occupy the workshops.

In all these cases, regulations were dodged because of the exceptionality of the framework, allowing the development of what in other circumstances would have been considered illegal or undesirable. While municipalities often distrust what they cannot control, the examples of cooperative housing, public space or facilities that have been discussed demonstrate a positive impact and degree of experimentation that could have not been achieved otherwise.

Additionally, at a social level, autonomous areas play an important role in training citizens in everyday politics and increasing their awareness of the opportunities that arise with self-organisation, while increasing their knowledge about how the city is managed and how decisions are made. As David Harvey states: “the question of what kind of city we want cannot be divorced from the question of what kind of people we want to be, what kind of social relations we seek, what relations to nature we cherish, what style of life we desire, what aesthetic values we hold” (Harvey, 2013, p.4). In this context, collaborative architecture is part of a larger process that entails pedagogical learning about the different stakeholders involved in the procurement process and post-occupancy use. This is explored in the next chapter, which discusses how the Toolkit can inform practice.

VI.

THE TOOLKIT AS PROJECTIVE TOOL

As stated by Paisaje Transversal, “A new way of doing [architecture] necessarily implies new procedures” (Paisaje Transversal, 2018a, p.46). Conversely: a new architectural process and outcome along with new tools and strategies necessarily implies a new way of thinking and practising architecture.

According to Jordi Borja (2013) architectural models (such as the Barcelona Model) cannot be replicated as formal solutions without the risk of specific details being misunderstood and producing unexpected results. However, what *can* be replicated are the processes, including tools and methods, which need to be flexible enough to be adapted to each social, political, economic and legislative context. The third aim of the Toolkit (T₃) is to function as an instrumental projective tool, addressing a line of enquiry that explores knowledge transfer in procurement processes, and adaptation to other contexts.

THE TOOLKIT'S ROLE IN INFORMING OTHERS' PRACTICE

The value of the Toolkit to architectural practice, and to architectural pedagogy, was tested in the 5th year Taller Temàtic Arquitectes de Capçalera (TTAC, AC

Thematic Studio). As described in Chapter IV, groups of students were given a physical copy of the Toolkit and asked to employ it to design the procurement process of their studio project. At the end of the term, students submitted a document that included a general project strategy and the discussion of tools employed during each project phase, their aims and the stakeholders involved (Figure VI-1). While describing their processes and design methods, students developed their own version of the Toolkit (Figure VI-2, see some of the submitted material in Annexe 4).

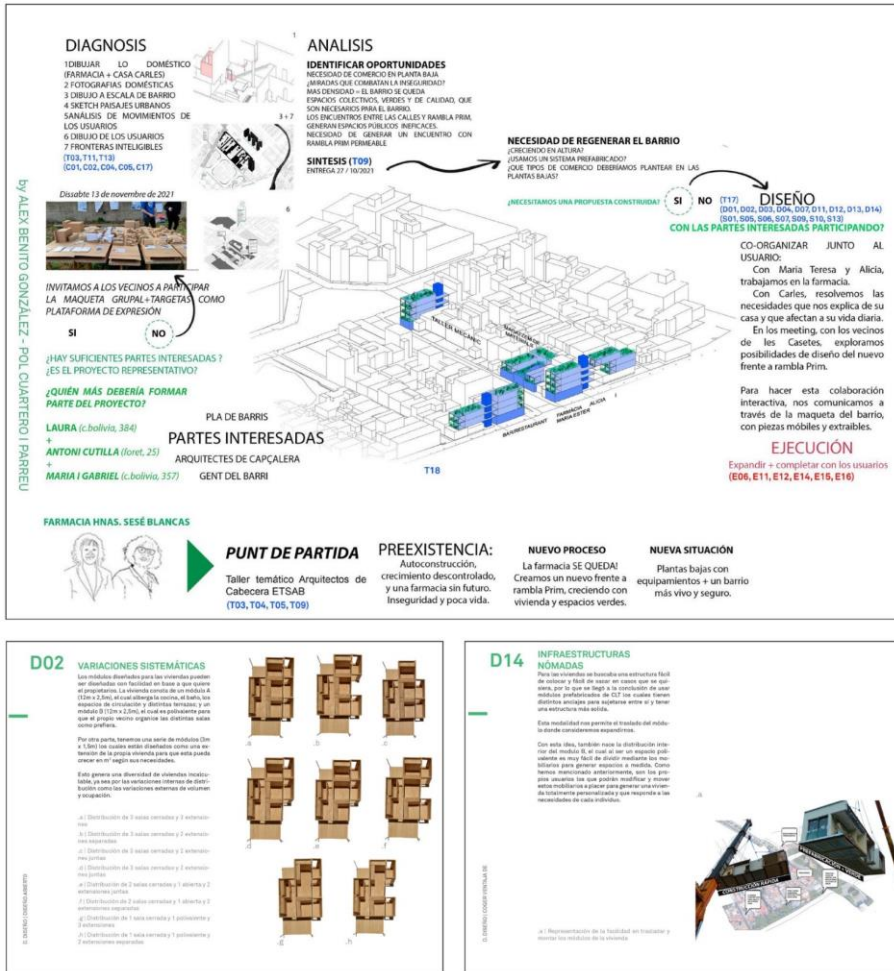


Figure VI-1. Example of the work developed by students (A. Benito González and P. Cuartero i Parreu.). Top: summarising mind map of the procurement process proposed by students. Each phase details specific tools (referred with alphanumeric codes) and the stakeholders involved (exemplified with two tools below).



Figure VI-2. Some of the students' submissions as a response to the brief to design a long-term community engagement process, *Arquitectos de Cabecera Studio* (TTAC – ETSAB), Autumn term 2021.

As an example, one of the students' groups proposed a procurement process containing a number of different scenarios which entailed different degrees of complexity in implementation (Figure VI-3). Their reading of the existing situation, users and diagnosis (in the centre of Figure VI-3 from bottom to top) results in three overlapping designs – “lifesaving” urgent actions (left-hand column, including the urgent refurbishment of housing units in substandard conditions), community actions (middle, with shared outdoor areas and large-scale environmental devices) and “co-neighbourhood” actions (right-hand column, addressing urban space) – that could be developed by different agencies and involve different stakeholders aiming for different sorts of impact (as specified in the different codes in the circles, detailed on specific sheets). These scenarios were developed in a joint diagnosis in which neighbours stated their needs and preferences, and were summarised by students in their Toolkit

tool AE19 (Figure VI-4), which then resulted in design proposals (Figure VI-5). As in the case of my Toolkit, students employ alphanumerical codes which in their case links design methods with proposals.

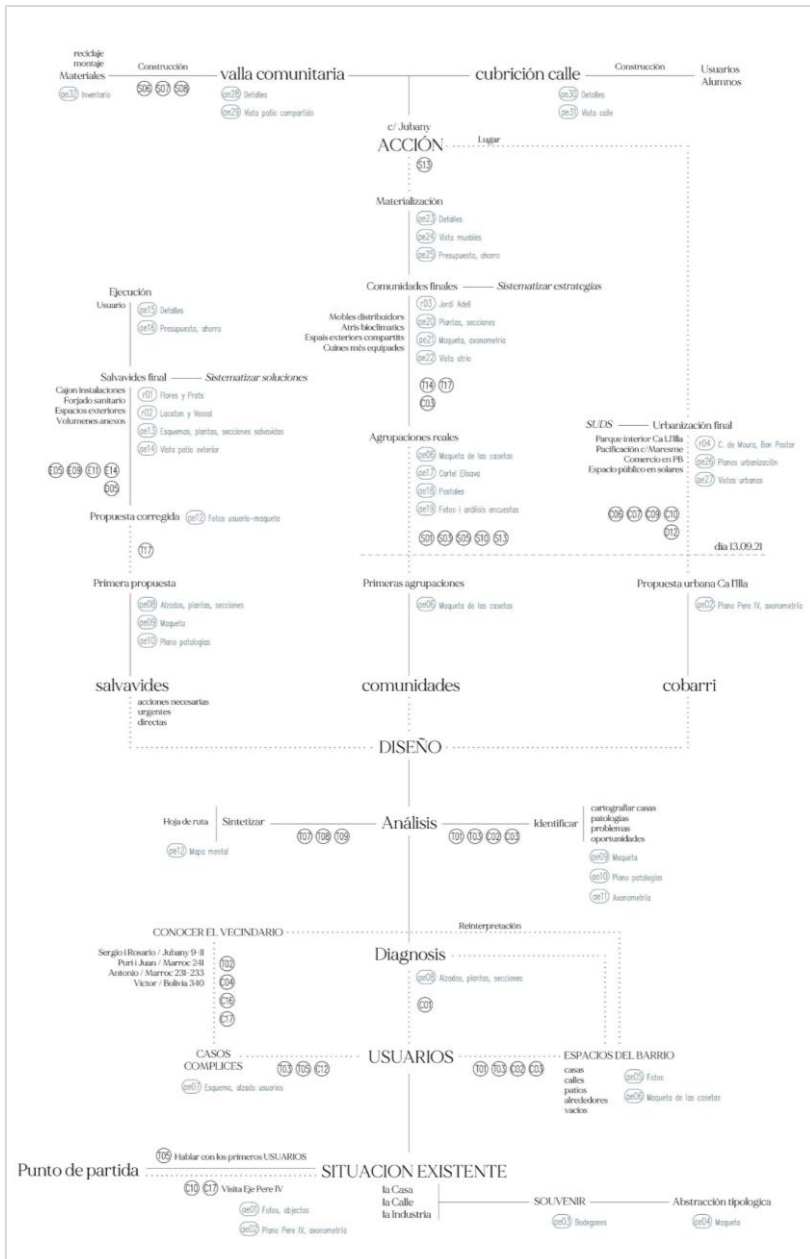


Figure VI-3. TTAC students Sara López, Pol Mateo and Pol Soto, diagram of the process with key moments and tools employed (in the circles). This document was presented by all the student groups, taking different representations and including different tools. See Annex 4.

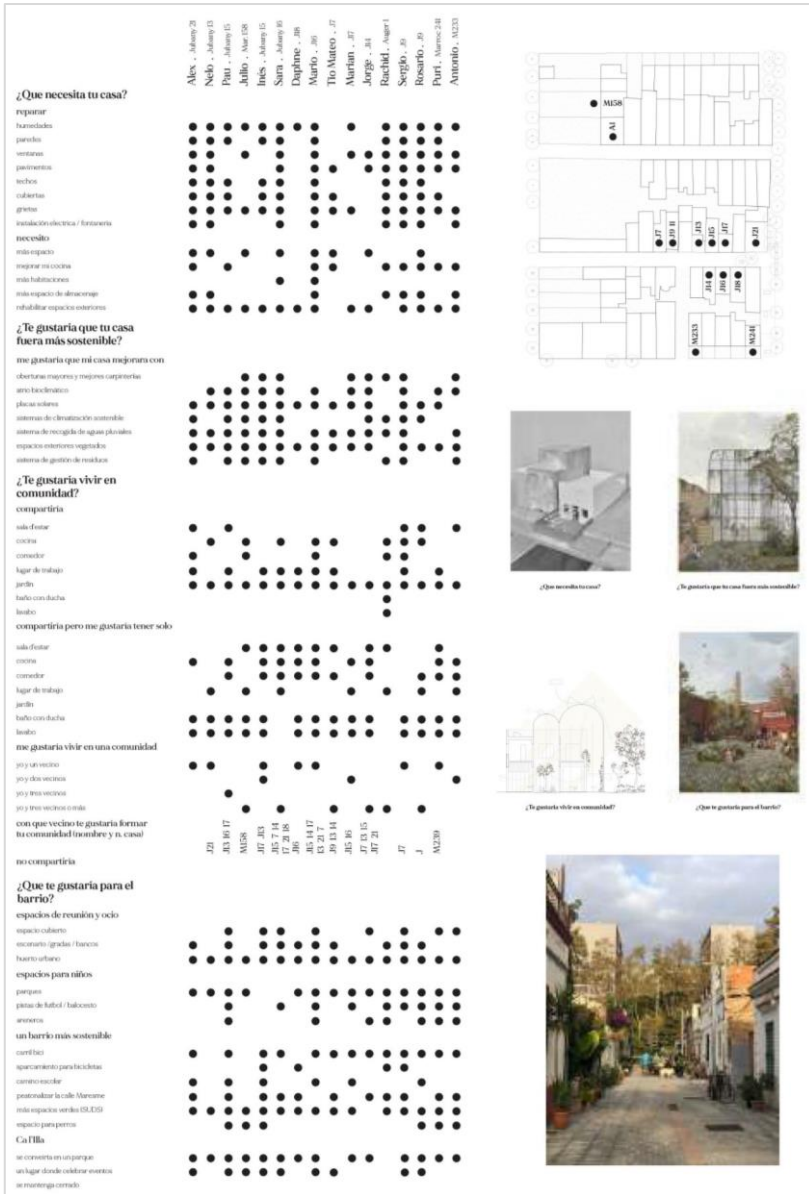


Figure VI-4. TTAC students Sara López, Pol Mateo and Pol Soto, tool AE19 of their Toolkit (see Annexe 4), which summarises residents' preferences as part of the Diagnosis phase (shown as original in Catalan). Rows indicate specific issues grouped into general topics: home (reparation and improvements), sustainability improvements, community living (shared spaces and size of the co-housing unit), neighbourhood (leisure space, children's spaces, and sustainability). Each column represents the responses of one of the neighbours,

named at the top. The right-hand side of the image shows a map of the Casetes area and some images of potential projects that could be developed.



Figure VI-5. TTAC students Sara López, Pol Mateo and Pol Soto. Design proposals emerging from the employment of the Toolkit and responding to different needs and scenarios, according to their procurement process (Figure VI-3). Note the alphanumeric codes, which relate these designs with procurement stages. See Annexe 4 for full submission.

Despite the limitations created by an academic context, namely time and budget constraints, the Toolkit proved effective in supporting the development of tactical community actions where the entire studio met at the end of the term with local residents who had been involved in their projects during the previous months to explain their proposals and receive feedback on them (Figure VI-6).

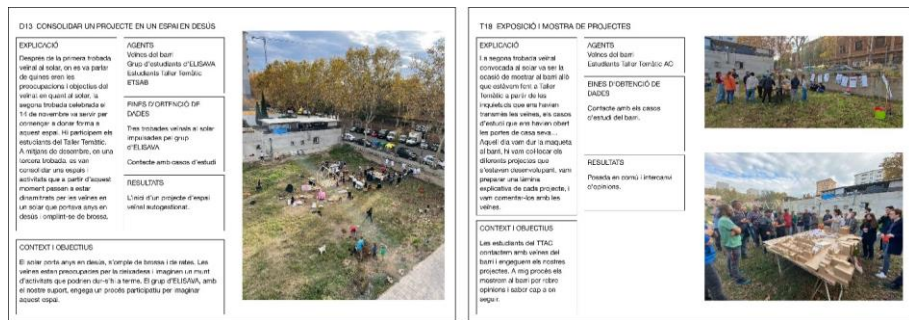


Figure VI-6. The Toolkit was employed to help develop a community action in an empty plot. Students A. Borrell Puig, A. Garrofé Pascual and J. Pou Rosich developed their own tools based on the Toolkit. Each tool reports on a step of the community project, defining the tool, aims and goals, stakeholders, data gathering methods, and results.

The work produced by students revealed that the Toolkit effectively helped students to develop a longer-term project strategy, offering them a broad range of strategies and methods that they were unfamiliar with. The Toolkit became an enabling pedagogical instrument to discuss project strategies, specific design tools, and the involvement of different stakeholders in the process.

Students not only designed the procurement process and the tools to carry it out, but also tested their Toolkits in order to directly inform their studio projects. It also forced students to engage with and analyse the tools, not merely as readers but also as writers who had to explain the reason for choosing specific tools to others. In doing so, the Toolkit became not only a tool to design a

procurement process, but also one that enabled students to develop a research project based on their own approach to collaborative design and its potential impact.

In this process the Toolkit raised awareness of several issues that are often not taken into consideration in studios that only address design and execution stages, such as social, economic or political conditions that guarantee feasibility, and problems and challenges of stages beyond design and construction. In doing so, the Toolkit enabled a clear conceptual understanding of the whole process and a more systematic discussions about management, power relations, and citizen engagement at different stages of the project's procurement process, ranging from management and feasibility to post-occupancy dialogue. In addition, it also raised awareness of architecture's dependence on external conditions, so the design of students' processes revealed a certain degree of openness, as opposed to other studio projects presented as formally defined finite results.

Both Zaida Muxí and Ibon Bilbao stressed the usefulness of the Toolkit for both students and tutors in providing a structured taxonomy to discuss appropriate tools and methods (some of which were already commonly employed in the design studio) by thinking through the possibilities and processes offered by each..

The multiple interpretations of the Toolkit (Figure VI-2, left images) developed by students evidenced its applicability and adaptability to different situations as an open methodology, addressing issues that were specific to both the approach to the context and resulting design.

COLLABORATIVE ARCHITECTURE AS PEDAGOGICAL PRACTICE

“Good design becomes meaningless tautology if we consider that man will be reshaped to fit whatever environment he creates. The long-range question is not so much what sort of environment we want, but what sort of man we want.”

— Robert Sommer, 1969

Collaborative practices represent not just a shift in power structures during decision-making but also a change in collective organisational methods and knowledge production. After Elinor Ostrom’s (1990), study of communal government some authors have focused on outcomes beyond the management of physical shared resources, such as how the effect of communal management in social networks produces new forms of sociability (Stavrides, 2016; Ruivenkamp and Hilton, 2017). This happens because of commons twofold character: the common good as an object and the plural subjectivity that emerges from its management (De Angelis, 2017, p.32). Thus, commoning practices create “subjects of action” which make the metropolis again “the site of politics” (Stavrides, 2016). While these authors underline the relationship between management practices and the resulting subjectivities, Arun Agrawal (2005) goes a step further in suggesting that transformations in “knowledge”, “politics”, “institutions” and “subjectivities” are interdependent and must be studied in relation to how they shape one another. Agrawal concludes that governmental practices produce and create subjectivities through the generation of knowledge. He reaches this conclusion after studying the effect that a shift from coercive measures to the inclusion of communities in environmental governance has on people.

Agrawal's approach applied to urban transformations questions the role of architects in this process as not merely that of a spatial designer. Collaborative practices have an impact on the stakeholders involved in them, such as professionals (local government designers and policy-makers, and architectural offices), residents and users, and society at large. Once again, cooperative housing offers the clearest example of the interrelationship between space, management, social behaviour, protocols of governance, and the knowledge that emerges from it. However, a similar process – with less focus, given the less intimate relationship of users with public space – occurs in other project types that were analysed, such as public facilities and public space.

In the case of cooperative housing, the three first categories defined by Agrawal can be clearly identified. Knowledge that emerges from direct experience in cooperative housing buildings and has an impact on them, and that can be transferred as distinctive know-how – for example, in the form of publications that refer to the legal and social framework that enables it, methods to develop, design or manage a project, or international informative experiences (Sostre Civic, 2017; Lacol, 2018; Lacol and La Ciutat Invisible, 2018; La Dinamo Fundació and Lacol, 2019; Mogollón García and Fernández Cubero, 2019; La Dinamo Fundació, 2021). This knowledge emerges from, and has an impact on, politics, understood as decision-making protocols and agreement mechanisms within the members of housing cooperatives and the negotiation among them. New institutions, such as housing cooperatives (Sostre Civic), foundations (la Dinamo Fundació) or at a regional scale (Sectorial d'Habitatge de la Xarxa d'Economia Social i Solidària (XES, the Housing Sector of the Social and Solidarity Economy Network) are recognised as political voices by different municipal departments and act as mediators between public institutions and citizens fostering a greater involvement of citizens in urban governance. They aim for an impact on decision-makers to enable further projects to be developed,

both in terms of regulatory frameworks and access to land. Additionally, they offer technical assistance (read as knowledge transfer) in relation to management, economic and legal issues but also acting as umbrella developers.

The interdependence of these processes has an impact on Agrawal's fourth dimension: the subjectivity that emerges from and has an impact on new forms of knowledge, politics and institutions and that evidences the pedagogical impact of collaborative procurement. Cooperative housing questions capitalist principles and associated social structures, which spatial translation is best exemplified by the Henry Roberts' "Model House for Families", presented at the Great Exhibition of 1851 in London, that provided a normalising spatial framework – a rigid domestic definition: the self-contained flat inhabited by the nuclear family – as a device of capitalist control and reproduction (Aureli and Giudici, 2016). According to Robin Evans (1978b), Roberts' design became an instrument for social and moral education by identifying families as autonomous accountable social units, separating family members from each other by gender and age, and institutionalising domestic labour under the authority of parenthood. The family became a "tutelary complex" of asymmetrical power and social relations (Donzelot, 1979). The reading of the family as an essential life stage is still present in Spanish housing regulations,⁸⁴ with flats for nuclear families being the most common unit in public and private procurement.

The fact that cooperative organisations challenge cultural constructs of housing from within – proposing, developing and practising the model rather than just theorising about it – with the support of municipalities and other public institutions enables new models to become a structural alternative to public and

⁸⁴ The General Metropolitan Masterplan Planning Regulations of Barcelona (Art. 277) presents marriage as an essential stage of life by classifying housing in dwellings for the young, the married and the elderly. In addition, it incorporates asylums and temporary accommodation,

private procurement: for example, not by making the family obsolete but rather by accommodating a diverse range of household structures, or by shifting the concept from individual to collective ownership rather than rejecting the idea of property outright.

In contrast to the single-family flats based on Roberts' model homes, in the analysed housing cooperatives, shared spaces are seen as an opportunity for socialising and the enrichment of collective life and often include generous circulation spaces and meeting spaces within and outside the building. This allows domestic space to be spatially discontinuous and scattered across the building, with activities that are typically domestic or private becoming part of collective life. For example, *la Borda* (W02) includes a communal kitchen, guest rooms, laundry room, and storage spaces. In addition, new projects that result from public competitions held in 2020, such as *Sotrac* or *La Quinta Força*, evidence an interest in cluster living, a distinctive typology that gathers different household units together and which has been successfully tested in other countries, including Switzerland (*Mehr als Wohnen* cooperative among others). The collectivisation of domestic activities straddles the dichotomy of public/private⁸⁵ as it intersects with male/female roles and productive/reproductive and care activities⁸⁶ (Hayden, 1981; Federici, 2011; 2012; Mogollón García and Fernández Cubero, 2019; Muxí Martínez, 2021). While the traditional isolation of women in the house restricted them from cooperating in the carrying out of domestic labour (Hayden, 1981), the

⁸⁵ "The private and the public are not basic anthropological constants, either, but rather historically established concepts subject to social and technological change. (...) The history of privacy and publicness is also a history of conflicting notions of what people should and should not do in a society." (Maak, 2015, pp.160–161).

⁸⁶ Care is defined as the activities carried out to sustain our lives, but also to necessary informal, and many times invisible, activities that make economic and productive activities possible (Mogollón García and Fernández Cubero, 2019).

collectivisation of domestic activities represents a significant transformation of culturally constructed gender roles in the domestic space (Mogollón García and Fernández Cubero, 2019).

However, as noted by Robin Evans (1978a), spaces designed for socialising do not necessarily produce sociable activities. Sociation, defined as “the form (understood in innumerable different ways) in which individuals grow together into a unity and within which their interests are realised” (Simmel and Levine, 2015, p.24) is a consequence of the interdependency between physical space, the psychological conditions it produces and the social activities that it encourages (Simmel, 2006). The interrelationship between social behaviour, subjectivity and space becomes a key parameter for designers. In public procurement, due to well-intentioned but naive design decisions, inefficient management, or poor maintenance, architects’ idea of ‘friendly’ shared space at the design stage can be contrasted with the users’ reading of the space as ‘hostile’ or inadequate when inhabited, ultimately resulting in deterioration of the building or changes by users that were not foreseen by designers (Salvadó, 2012, pp.209–215). In other words, undesired outcomes result from a disconnect between the understanding and involvement of users in spatial design, having an impact in post-occupancy (Figure VI-7, top).

To cooperative housing residents, community-led procurement can reveal the building as a process and highlights their agency in it, where residents are not only involved in planning the space; they also actively partake in its long-term management. Thinking “common spaces” (Figure VI-7, below) represents a political thinking about the space that emerges from a collective approach, and active participation in its constant redefinition, care, and management (Stavrides, 2016).



FIG. 121 De l'imaginari dels arquitectes a la realitat de la gestió d'Adigsa. Font: a la dreta © José Hevia.



Figure VI-7. Comparison of shared areas in publicly owned rented public housing and cooperative housing. Top: Nuria Salvadó compares two images of the public housing building in Sant Andreu, Barcelona, by Lopez Rivera architects, 2007. In the caption: “from the imagination of architects to the reality of Adigsa [Catalan public agency for the management of public rental housing]”. Salvadó checked how the open relationship between the house and the corridor envisioned by the architects resulted in a hermetic scenario. Source: Salvadó, N. (2013) *Intervals Habitats*. PhD thesis. Universitat Politècnica de Catalunya, p.212. Below: images from la Borda cooperative housing taken by the author on 6 April 2021, with corridors full of objects that evidence the trust between neighbours and a shared appropriation of space.

The management of cooperative housing buildings during post-occupancy is typically addressed through a general assembly (that usually takes place once a month) and the organisation of working groups, which may address, among other things, conflict management, maintenance of the building or management of communal spaces (shared laundry room, guest rooms, shared

kitchen, meeting areas, etc. Since self-management may be exhausting and time-consuming, and conflict and divergences may arise frequently, it is essential the developing organisational structures such as working groups and decision-making protocols to deal with these (La Dinamo, 2021).

In addition, informal meeting activities take place regularly: for example in la Borda a weekly dinner in the ground floor collective kitchen named la Gorda (the Overweight). Interestingly, in cooperative housing projects, these dynamics precede (or are the first steps towards) the production of space: future residents meet regularly during the development of the project prior to its construction to engage in the creation of the community in parallel with, or often even months before, the definition of the building.

Besides the impact on the definition of the space itself and improving further use, appropriation and care for the space, these processes strengthen local mutual support networks, offer an opportunity for peer learning, enable a better understanding of how cities are built and managed, and potentially increase awareness of the environmental impacts of construction.

Cooperative architecture projects also become catalysts for new developments. For example, the la Borda residents waiting list resulted in the formation of Sotrac, which applied to and was granted a plot of land in the 2020 competition. Despite the fact that the Sotrac building has not been finished, a community formed around it, along with others coming from other cooperative housing projects, is currently in the first phases of developing Empriu, another cooperative housing in the Can Batlló area. Thus, community-led projects can achieve an impact which extends beyond the boundaries of the project procurement and the building physical limits.

Consequently, the home and household are not autonomous units in the city but interrelated parts of a building, understood as a collective and shared

spatial, social and political project. In turn, cooperative housing buildings become parts of neighbourhood and city networks. While Western societies have historically seen a process of individualisation, fear of strangers and withdrawal from political life (Sennett, 1977), self-managed initiatives can become instrumental mechanisms for citizen engagement with politics. As a result, citizen engagement in collaborative architecture projects is changing how communities perceive their rights and responsibilities and their agency in urban decision-making.

The involvement of children in Coeducative Playgrounds (W16) and Baró Square (W21) produces a long-term pedagogical effect in which engagement in spatial decision-making and its construction is seen as a logical activity. Other projects of public space, such as la Santa (W19) Moviment Obrer Square (W20) or Baró Square (W21), evidence the suitability of these processes to be incorporated as part of larger city-making mechanisms. The participation of architectural offices, public agencies decision-makers and designers in projects with positive outcomes might encourage the replication of these practices by different municipalities and public institutions in other contexts.

It is in this regard that the Toolkit contributes to knowledge transferability and improvement of these processes by organising existing tools and proposing new ones to enable discussion and advance practices in collaborative architecture.

VII.

REDEFINING DISCIPLINARY BOUNDARIES

“The housing of our time does not exist yet;
however, the transformation of our way of living demands its realisation.”
— Josep Quetglas, 1994

The main aim (**A**) of this thesis is to analyse the impact of collaborative practices within and beyond the discipline of architecture. Thus its objectives are to reveal new and changing disciplinary tools and design methods (**O₁**), explore how the inclusion of stakeholders at specific stages informs an architectural project and results in both built and non-spatial outcomes (**O₂**), enquire into the contribution of architects to local demands beyond building delivery and a community’s understanding of their rights and responsibilities (**O₃**), and analyse the challenges and opportunities of collaborative architectural practices (**O₄**).

There has been a growing interest in collaborative practices from architectural offices, developers, local government, and users. Collaborative

practices are questioning how architecture understands itself as a discipline and the architect's design tools, expertise, and roles concerning other stakeholders in city transformation decision-making. Studying the role of the architect as that of an enabler and a mediator in Barcelona, I have been able to analyse the impact of a disciplinary shift on professional practice and academic teaching.

The local context is framed by the 15-M Movement in 2011 in which protestors claimed that the existing political and economic system was unfair and demanded a more equitable distribution of resources and the direct involvement of citizens in politics. Among these voices, architects' collectives argued for a politicisation of practice and a more committed role in the social dimension of the city (not just the physical one) in a redefinition of architectural practices.

Without claiming that there is a new Barcelona Model, I suggest the disciplinary shift offers an more effective new approach to contemporary city challenges and that can address spatial problems of any type and on any scale. Based on this, the PhD has studied how architecture projects become tools for civic engagement in city governance and, reversely, how civic engagement can improve the design and appropriation of architecture (**O₂**).

This thesis has been developed through a mixed-methods approach that has included Participatory Action Research (PAR), practice-based research, qualitative research and theoretical research (Figure I-5). Through them, a crucial part of this research is my development of a Toolkit for Collaborative Architecture, which has been key to achieving three specific aims that informed this research with practice-based knowledge (Figure I-5, below). First, a theorisation of practice (**T₁**), in which the Toolkit is instrumental in articulating theoretical discussions about power relations, knowledge asymmetries and professional responsibilities, enabling the in-depth understanding of

collaborative design processes in terms of decision-making as well as the design tools used. Secondly, an analysis of practice through case studies in the context of the lack of existing research tools for this purpose (**T₂**); 23 works of different sizes and scales, mostly in Barcelona, have been analysed in a joint reflection with respective authors through PAR. Key findings about **T₁** and **T₂** refer to the analysis of the rationale for, and the practice of, collaborative architecture and the theorisation of its impacts. Thirdly, the Toolkit responds directly to the need to the seventh research question (**RQ7**): what specific knowledge is generated through collaborative design processes, and how can this be transmitted into further projects in different contexts? In doing so, the Toolkit aims informing further projects based on methodological learnings from previous experiences (**T₃**). To assess this, the Toolkit was tested in an academic studio proving its effectiveness in raising awareness of the long-term impact of projects, take into consideration broader number of parameters throughout procurement process, and ultimately informing resulting designs. All the architects' offices and studio tutors involved in PAR acknowledged the relevance of the Toolkit as a unique documentation of collaborative architecture and the positive impact it would have on their practice and teaching by presenting design tools and methods in an organised manner and broadening the scope of those they already employ. In doing so, the Toolkit has become a two-way process of practice-based questions informing research, while the outcome of this research aims to have a further impact on practice.

Intersecting with the research questions (**RQ**) contribution to knowledge of this research can be grouped in three areas, which structure key findings presented below:

01. On architects who practice collaborative architecture:

RQ1: How has office organisation and management changed?

RQ2: Given the wider social politicisation, what are the office's aims beyond design?

02. On the production process of collaborative architecture:

RQ3: Which are the new roles beyond design and build? How do architects relate to other stakeholders?

RQ4: Which new tools and methods are being employed and how are traditional ones are being adapted?

03. On the impacts of collaborative architecture:

RQ5: What design and research opportunities emerge at material, typological and construction levels?

RQ6: How are collaborative practices affecting policy changes, urban governance, and citizens' perception of their rights?

ON THE ARCHITECTS WHO PRACTICE COLLABORATIVE ARCHITECTURE

The disciplinary shift is visible in the changes in studios practising architecture. First, this can be seen in terms of organisation and management (**RQ1**), and involves a move from conventional architecture offices towards offices which are managed horizontally and run collectively, most commonly emerging as informal collectives and then evolving into associations, and in some cases finally into workers' cooperatives. In parallel, architects' collectives support, and sometimes become members of, grassroots movements and neighbourhood associations within the *Esconomia Social i Solidària* (ESS, Social and Solidarity Economy) as a socio-economic and political alternative to the capitalist economy. Second, it is evidenced in collectives' aims beyond design (**RQ2**), making political involvement an everyday practice of the professional office, not just a form of activism. By actively taking a political stand and becoming involved with grassroots movements, community architects are both the product

of social mobilisation and drivers for social transformation (O₃). The aims of collectives include promoting the right to the city ([1968] Lefebvre, 2017), spatial justice (Soja, 2009), environmental sustainability and feminist claims, as well as the questioning of their own expertise and contribution to urban transformation. As the translation of data gathered into architectural drawings, the cartography as a representation of the reality within which architects operate, developed after data gathering stage, evidences a shift in what architects consider relevant information for design: the interdependence between the spatial, social and intangible dimensions of the city. Although collectives focus mostly on community-led projects, they do not refuse to work with public or private clients, but their aim is a transformative shift in the goals and impacts of architecture.

New architectural approaches are also visible in some of the studios of the public schools of architecture in Barcelona (ETSAB) and el Vallès (ETSAV), evidencing a change in architectural pedagogies towards social agendas. Although already well known in wider international contexts, learning-by-doing and live studios are being employed to operate as architectural practices in developing projects throughout all the procurement stages and achieving a direct transformation of the city. Distinctive skills that emerge from collaborative studio dynamics include a direct understanding of urban and social complexity (derived from addressing everyday problems in real scenarios) social skills (such as conflict handling, divergences negotiating diverging views, ethical awareness) design (in terms of the adaptation to contingency and changing circumstances, collective management of resources, matching intentions with feasibility), and construction (resulting from direct hands-on experience). In the long term, the dynamics of cooperation and mutual help in studios are having an impact on the expectations of students on their future professional practice, thus becoming incubators that lead to the establishment of collective practices.

ON THE PRODUCTION PROCESS OF COLLABORATIVE ARCHITECTURE

Since the city is the place where diverging needs, priorities and political and economic agendas meet, practising architecture inevitably entails addressing city's political dimension. By addressing social needs – of any sector of society – and dealing with everyday problems, architecture becomes a social practice. Both the social and political conditions of architecture turn the architect into a mediator and enabler (**RQ3**). The challenge for architects in their work resides in renouncing neither their professional responsibility nor their expertise, while facilitating users' right to the city.

The need to operate in the social dimension of the city – and not only in its morphology – shifts the traditional approach of the architect addressing the single client (private or public developer) towards the collective, heterogeneous and contradictory dimension of the city. The inclusion of a larger number of stakeholders and voices, particularly current or future users, in a collaborative project has questioned traditional design methods and produced the need to develop new ones, not denying traditional architectural knowledge but expanding the operational boundaries of architecture (**O1, RQ4**).

It is specifically through the Toolkit that the disciplinary shift in architecture from its traditional design methods through a taxonomy of 118 collaborative design tools and strategies is documented (**RQ4**) and analysed as distinctive form of knowledge produced by these practices (**RQ7**). In being organised by project procurement stages of the architectural project, the Toolkit reveals specific ways in which architecture can impact design decisions throughout procurement phases. And, by offering a panoramic overview of hundreds of projects, traces connections between architectural thinking in different geographical and historical contexts and frames the disciplinary shift in Barcelona within a broader disciplinary tradition.

After analysing the 23 built projects in Barcelona through the Toolkit I have concluded that citizen engagement in the architectural collaborative project should not be understood as a one-off event, nor as a straightforward distinguishing of roles. On the contrary, most of the cases analysed do not fall into the categories of “bottom-up” or “top-down”, but are hybrids dependent on the productive collaboration between partners for their mutual benefit, in which stakeholders take variable roles depending on the procurement stage. Likewise, the projects analysed blur the boundaries between the categories of strategy and tactics as defined by de Certeau (1988),⁸⁷ scaling up the possibilities and impact of community-led initiatives and resulting in design opportunities for architects, users and developers beyond the design and build stages.

ON THE IMPACTS OF COLLABORATIVE ARCHITECTURE

For architects, collaborative practices most commonly include extending their contribution from design and building to the diagnosis and post-occupancy phases, producing specific design opportunities that have an impact on the resulting architectural project, as distinct from more conventional forms of procurement (**RQ5**). Far from being an obstacle for architects, the involvement of users means the recognition that citizens have intrinsic knowledge of the city as users and that they may assume risks in decision-making for their further benefit, thus opening the door to experimentation that is almost impossible in either public or private procurement. The key findings in relation to design opportunities are presented organised by project procurement phases.

At an early stage of diagnosis, the inclusion of local voices enables a bespoke approach to urban problems: rather than being a standard response to

⁸⁷ Strategies depend on the deployment of vertical power in a controlled area; they are “a triumph of place over time” and tactics are temporary and calculated actions in a permanent search for opportunities; “on a clever utilization of time” (de Certeau, 1988).

urban problems, the inclusion of users in the formulation of the design question enables both a more precise framing of contextual specificities (morphological, social, economic) as well as the identification of opportunities resulting from local knowledge and commitment.

The proposal stage can be split into three phases: analysis and strategy, design, and execution. The analysis and strategy tools reveal the involvement of architects and users in strategic and management decisions, including discussing needs and priorities and setting evaluation indicators that are reviewed at the end of the process. It also allows the joint evaluation of what scale of intervention is needed: as a result of the climate emergency and an increasing lack of resources, collectives question whether the best approach to an architectural problem is a built response, or whether it could take the form of reprogramming the space, maintenance strategies, or undoing built interventions.

Collaborative methods in the design and execution phases reveal how the inclusion of users can enable non-standard solutions to architectural problems. For example, in the case of cooperative housing this translates into typological (with shared spaces typically belonging to a private dwelling), regulatory (with rooms that can belong to different housing units at different moments in time), material (promoting less conventional construction methods such as cross-laminated timber (CLT) or compressed earth block (CEB) construction) or environmental (with large-scale passive systems such as greenhouses) experimentation.

When it comes to the design stage, asymmetrical knowledge between architects and users emerges strongly, as well as stakeholders' claims over the right to take certain decisions involving those issues that are technical (including typological, material, constructive, environmental and regulatory) and aesthetic (linked to preferences, but also to cultural appropriation and identity). Both

technical and aesthetic dimensions are interrelated. Three different but complementary design strategies have been identified that allow user engagement for the benefit of the project: bespoke consensus (when designers and users agree on specific solutions), typological variations (typical in housing, when a number of consensual options are available for users to select), and adaptable systems (in which architects design rules and parameters, which then are freely developed by users).

In turn, users' commitment achieved during this phase plays a fundamental role in the post-occupancy stage in terms of management and maintenance of the space; in cooperative housing this refers to shared spaces but could also be applied to public space or facilities. In Spain, while there is a high level of user involvement in the design phase, it is less common during construction,⁸⁸ although it has been developed in cooperative public spaces and facilities to different degrees under the supervision of architectural projects that did not require expert construction knowledge.

Finally, the post-occupancy stage reveals opportunities that emerge from architects developing their role beyond the delivery of a building. As has been evidenced from the analysis of case studies, the post-occupancy involvement of architects is beneficial for designers, public agencies and users, since it includes learning for both parties, and yet is often overlooked by developers. First, the consideration of buildings as permanently unfinished sets the framework for users to be able to continue updating their spaces to accommodate their changing needs, a condition closely linked to a management approach that understands the building as permanently adaptable to users. This has been particularly noted in the cooperative housing model. Second, the post-

⁸⁸ As resulting from health and safety measures in National Building Development Act (Ley de Ordenación de la Edificación 38/1999).

occupancy stage offers the opportunity for architects to evaluate both process and outcome, either internally or by including users with participatory methods, improving design methods and protocols and models more generally. Evaluating the indicators established in the analysis phase enables power relations to be reviewed and adjusted in the process and an identification of whether expectations were fulfilled. Thirdly, the technical support offered to residents by architects during occupancy enables them to gain direct feedback from residents, and check the design hypothesis and the user commitment that was anticipated. In a reverse process, it can offer dwellers the opportunity to better understand both the design decisions and the building.

Collectives underscore the importance of the evaluation of both the procurement process and the post-occupancy spatial performance and the transfer of knowledge in the form of books and reports. This becomes distinct from conventional forms of procurement, in which the process of decision-making in its specific phases is not explained since it is taken for granted or not considered part of the architectural project. On the contrary, questioning the process – and adapting it to specific contexts – and evidencing the learnings that result reveals how collectives aim for an impact in the wider social and political frameworks in which their projects are developed (**RQ6**), ranging from cooperative housing to public spaces and facilities renovations framed by protocols of civic engagement.

Within this approach, collaborative practices have a pedagogical impact on those involved in them, including policy-makers and designers from the municipal or city government and independent designers, residents and users, as well as visitors. As Agrawal (2005) noted, “knowledge”, “politics”, “institutions” and “subjectivities” are interdependent and shape each other. Most evident in cooperative housing, distinctive forms of knowledge (collaborative

management, design tools), politics (protocols of decision-making that also have an impact on policy changes, urban governance), and institutions (housing cooperatives, civic groups, and foundations) shape, and are shaped by, subjects with a deeper awareness of how the city is managed and built, citizens' rights in decision-making, the work of public and institutional decision-makers, and the environmental impacts of construction.

The projects that were analysed reveal results that would have been unachievable by either the municipality or grassroots movements on their own. On a very basic level, this concerns project feasibility. From that point onwards, it relates to the impact that they can achieve at multiple levels and that are linked to the degree of experimentation mentioned above. Finally, these processes have evidenced a transformative impact on policy-making, from municipal regulations to regional legislation.

Crucially, most of the studied projects represent a double condition of autonomy – that allows experimentation and a challenging of conventional forms of procurement – as well as collaborative dependency – that ensures the feasibility of the project in testing non-standard solutions, adapting regulations, or receiving direct or indirect support. The key question is how to enable citizen initiatives for the collective development and management of public or shared resources without them becoming institutionalised, which would reduce experimentation in the long term, and reduce the motivation of citizens to engage with the project. These processes should entail neither a replacement of public services by citizen initiatives nor a dismissal of grassroots projects by a paternalistic local government that turns citizens into passive receivers of public policies. This means that a certain degree of friction, both autonomy and collaboration between both parties, is required. These processes produce the need to create areas of experimentation that regularly challenge given constructs.

Autonomous experimental areas – reinterpreting Hakim Bey’s (1991) Temporary Autonomous Zones (TAZs) – could be a significant aspect of a much more structural policy within the city through the establishment of areas that blur regulations and where the control of the municipality over them is limited. This would recognise the intrinsic knowledge that local communities have of their built environment, including the problems and opportunities, and their capacity to be part of a proactive set of initiatives that respond to their needs. For public authorities, this offers the opportunity to test new regulations that cater for changing needs, the local self-provision of services, increased political awareness and the strengthening of neighbourhood networks for mutual support and help. In turn, strategies tested on a smaller scale can then be implemented (with adaptation) as public policies, offering the chance for decision-makers to make their decisions more transparent, and thus generate long-term trust between those who manage and those who inhabit the city. However, disagreements and conflicts hereby are an intrinsic part of urban transformation. The question is not whether divergences should exist or not but how they can be made operative.

FUTURE DIRECTIONS

As well as the positive results it received after testing, this research has also highlighted some limitations of the Toolkit – and derived learnings. First, the evolutionary nature of the Toolkit, with multiple and frequent changes in its structure and content, shows that this is a live document that changes with further testing and new project experiences. The open-ended nature of the Toolkit puts into question its format as a book – a finite object – and whether a format that allows regular updates, such as a website, would be more suitable; however, this would be dependent on long-term financial support.

Second, both the research and the Toolkit present an obvious Eurocentric bias. Although this was planned as part of the research framing, further research should incorporate a wider spectrum of geographical contexts, which in turn include political and legislative frameworks. This is most evident in the limited attention paid in the PhD to self-build approaches, which are very common in certain countries but discouraged by Spanish health and safety regulations.

Third, the Toolkit should be tested over a longer time-span and in-depth checking than that enabled by this research. That is, to employ the Toolkit in a project over a number of years using PAR. To do so, the Toolkit could be tested by architecture practices with different degrees of familiarity with collaborative tools and strategies, in combination with regular workshops over a number of months and years, in which I could both offer assistance and gain feedback. It would also be desirable for this process to be developed together with public procurement agencies, such as those overseeing housing or facilities, that have expressed the aim of updating their procurement methods towards collaborative practices. This last suggestion would have an impact on the disciplinary shift and the implementation of collaborative architecture in a systemic way at a city scale, despite the contradictions that inevitably would emerge. On this line, this thesis argues that collaborative architecture is based on the innovative negotiation of divergences. As is evident, urban problems are never solved but merely reformulated, at best improving the original conditions but inevitably creating a new set of problems. Urban regeneration, followed by gentrification, is the clearest example of this phenomenon. However, the question is: how is this done and who benefits from it, what agency do the different stakeholders have and what are the long-term consequences?

This thesis does not argue that citizen engagement produces better design outcomes *per se*, but that by enriching the process of the project new possibilities

can emerge which would be unachievable otherwise. The unique nature of the architectural project in relation to other social practices, both analytical and propositional, morphological and social, makes the architect fundamental in the procurement process beyond the design and execution stages. However, the limitations of the discipline should also be recognised and embraced as opportunities to improve the work of architects through the necessary collaboration with other disciplines. Thus, architects should become enablers throughout the process by taking different roles that respond to different project phases. In other words, architects are key in urban transformation as much as the discipline is dependent on others for its success. In this framework, a clear and open articulating method is paramount. With this in mind, I understand architecture as an open process whose outcomes might not be restricted to buildings. Considering the process of design as an outcome *per se*, I claim that collaborative practices of decision-making are at the heart of urban transformation, and thus should be of paramount interest to architects.

In other words, I consider the (collaborative) design of the (collaborative) process as an architectural project in itself.

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ANNEXES

Annexe 1: Qualitative research: interviews

Annexe 2: Community-led projects developed as practice-based research

Annexe 3: Toolkit as instrument for the analysis of 23 works in barcelona

Annexe 4: Toolkit as projective and pedagogical tool

Annexe 5: The genesis of a research: mind maps 2017-2022

ANNEXE 1:

QUALITATIVE RESEARCH: INTERVIEWS

INTERVIEWS DEVELOPED ON THE FIRST PHASE OF RESEARCH

HOLE OF SHAME – WELL OF THE FIG TREE SQUARE

Jaume López (political scientist in UPF and documentalist)	(nº 1) 23.10.2019
Matteo Caravatti (Architects without Borders Spain)	(nº 3) 1.11.2019
Maria Mas (neighbourhood association AAVV Casc Antic)	(nº 5) 13.11.2019
Jaume Artigues (architect and urban designer of <i>Forat de la Vergonya</i>)	(nº7) 19.11.2019
Hubertus Poppinghaus (architect and president <i>Veïns en Defensa Barcelona Vella</i>)	(nº 8) 10.12.2019
Aldà Almirall (self-managed Casal de Barri Pou de la Figuera)	(nº 9) 12.12.2019
Marc Aureli Santos (architect, director of “projects and works” of Focivesa)	(nº 14) 15.01.2020

CAN BATLLÓ COMPLEX

Lluc Hernandez (Coopolis and Lacol)	(nº 2) 24.10.2019
Ferran Aguiló (activist and cooperativist)	(nº 4) 6.11.2019
Noel Gonzalez (teacher at Arcadia School)	(nº 11) 12.11.2019
Marc Dalmau (sociologist, Ciutat Invisible and activist in Can Vies)	(nº 16) 23.01.2020
Batlle & Roig (architects masterplan and public space temporary design)	
Mario Suñer (urban design project leader) & Abel Porcar (Planning Director)	(nº 20&21) 21.02.2020

CAN 60 HOUSING-FACTORY

Ravetllat Ribas (winning competition architects)	(nº 12) 11.01.2020
Ibon Bilbao (director <i>Arquitectos de Cabecera</i> studio in ETSAB)	(nº 13) 13.01.2020
Santi Ibarra (District Councilor, architect)	(nº 15) 22.01.2020
Quirze Serradell (Capoeira studio)	(nº 17) 23.01.2020
Martí Llorenç i Rebecca Mutell (Factoria Heliogràfica)	(nº 18) 24.01.2020

SANT PAU SOCIAL GYM

Ferran Aguiló (activist and cooperativist)	(nº 4) 6.11.2019
David Juarez (architect Straddle 3)	(nº 6) 13.11.2019
Ernest Morera (director of Sant Pau social gym)	(nº 10) 12.11.2019
Santi Ibarra (District Councilor, architect)	(nº 15) 22.01.2020
Tonet Font (Social Innovation as Deputy Mayor Consultant, la Dinamo, AC)	(nº 19) 20.04.2020

NEW HOUSING MODELS

Tonet Font (social innovation adviser city council, la Dinamo, AC, professor)	(nº 19) 20.04.2020
Josep Maria Borrell (technical coordinator metropolitan housing agency IMPSOL-AMB)	(nº 22) 22.04.2020
Lali Daví (rol dynamo, cooperative housing).	(nº 23) 23.04.2020
Nuria Colomé, (Celobert, PerViure & Housing Plan 2016-25)	(nº 24) 02.05.2020
Ivan Gallardo (architect and technical staff in municipal housing agency IMHAB)	(nº 25) 05.05.2020
Yabel Pérez (architect and technical staff in housing Cooperative Sostre Civic)	(nº 26) 05.05.2020
David Juarez (architect Straddle 3)	(nº 6) 13.11.2019

NEW PEDAGOGIES

Jordi Ros (dean ETSAB 2013-2017 and practising architect)	(nº 28) 08.02.2021
Zaida Muxi (ETSAB professor in Urban Studies)	(nº 32) 08.03.2021
Manu Rodriguez (coordinator Fundación RIA, Galicia)	(nº 29) 18.02.2021
Coque Claret (ETSAV Design tutor)	(nº 27) 04.02.2021
Jordi Mitjans (ETSAV Design tutor, Arqbag)	(nº 30) 19.02.2021
Amadeu Santacana (TAP 4 tutor and Head of Section ETSAV of Design Department)	(nº 31) 03.03.2021

PROTOCOL FOR SEMI-CONDUCTED INTERVIEWS:

0- Formulari consentiment i consentiment gravació.

Consent Form and recording.

Introduir conversa: (introduction):

avui és dia... estic entrevistant... en el marc del meu doctorat

today is.... I am interviewing.... within the framework of my PhD...

dones el teu consentiment a que sigui gravada i transcrita a la tesi? (a més a més de consentiment escrit)
do you give consent for this interview to be recorded and transcribed ? (in addition to written consent)

si hi ha alguna part que volguessis que no fos així, ho podries mencionar

If there is any part that you prefer not to be recorded, let me know

QUESTIONS FOR CASE STUDIES (HOLE OF SHAME, CAN BATLLÓ COMPLEX, CAN 60 AND SANT PAU SOCIAL GYM)

1. Pots explicar el procés? Quines fases hi va haver?
Can you explain the process? Which phases existed?
2. Quin va ser el teu rol en el procés?
Which was your role?
3. Quins agents hi van participar? Amb quins interessos? Com es veien els uns als altres?
Which stakeholders were involved? With which agendas? How did they see each other?
4. Quin va ser el conflicte? Com es va resoldre?
What was at the core of the conflict? How was that addressed?
5. Quin va ser el rol dels arquitectes involucrats? (col·lectius, administració, etc).
What was the role of architects involved (collectives, administration, etc).
6. Quina valoració en fas avui?
Which is your assessment of those events?
7. Que hauria hagut de fer-se de forma diferent (per part de quin agent?).
What could have been done differently (if so) by which stakeholder?
8. Com creus està evolucionant el moviment associatiu i de barris a Barcelona?
How do you think associationism is evolving in Barcelona?
9. En cas de moviments associatius, com estaven organitzats? Com es prenen decisions, com es negociava?
In case of social movements, how was the Organization and the decision making and negotiation protocols?

10. Qui convida a qui a participar? Qui defineix les normes del joc?
Who invited who participate? Who defined protocols?

QUESTIONS FOR NEW HOUSING MODELS:

11. Quin és l'objectiu de... (el lloc on treballes, entitat d'habitatge, etc) i quin és el teu rol?
What is the goal of... (where you work, group you are involved in, etc). and what is your role?
12. Règim de finançament, tinença i model de gestió.
Financial, ownership and management model.
13. Per a qui? Usuaris i estàndards.
For whom? Users and standards.
14. Rol dels arquitectes?
Role of architects?

QUESTIONS FOR NEW PEDAGOGIES:

15. Quin tipus de pedagogia en quant a coneixements i eines proposes des de l'escola?
What pedagogy do you propose, in both terms of knowledge and aims?
a. Quins són els enunciats? Dinàmiques de classe?
What are the briefs? Special class dynamics?
16. Has notat canvis, més enllà de plans d'estudis, en l'ensenyança de l'arquitectura la forma de presentar enunciats, relació alumne-professor, després de...
Have you noticed changed, beyond new plans of studies, to architectural pedagogies and briefs, student-tutors relationship, after...
a. La crisi de 2008...
2008 crisis...
b. Les mobilitzacions UPC (retalles+Open ETSAB/ETSAV 2013...)
UPC mobilisations (economic cutbacks + Open ETSAB/ETSAB 2013...)
17. Quina ha de ser l'impacte de l'escola d'arquitectura a la societat i ciutat?
What should be the impact of the school of architecture in society and the city?
18. Quines eines i competències necessita aprendre l'arquitecte durant la carrera?
What tools and competencies should a student learn throughout architecture?
19. Que canviaries, afegir o treure, del pla curricular?
What would you add or take out the curricular plan?

CONSENT FORM:



Participant Project Information & Consent Form

(One signed copy of this form should be retained by the Participant and one copy by the Project Researcher)

Community Architects: New Roles and Disciplinary Shifts in Barcelona

Supervisor: Dr. Sam Jacoby - RCA
Second supervisor: Ibon Bilbao – UPC

For further information
sam.jacoby@rca.ac.uk
ibon.bilbao@upc.edu

Date: _____

Dear Potential Participant,

I am Raül Avilla-Royo (raul.avilla.royo@network.rca.ac.uk), PhD by Practice candidate in the School of Architecture at the Royal College of Art. As part of my studies, I am conducting a research project entitled 'Community Architects'. You are invited to take part in this research project which, taking Barcelona as a research context, it explores a theory of urban transformation framed by social movements and commoning practices through inquiring on the new roles of architects as part of a strategic re-thinking urban development.

If you consent to participate, this will involve an interview about your involvement in _____

Do you consent this interview to be recorded and transcribed? _____

Do you consent to be identified and quoted in the transcription of the interview? _____

Participation is entirely voluntary. You can withdraw at any time up to the point of publication and there will be no disadvantage if you decide not to complete the study. All information gathered will

Research Office Royal College of Art Kensington Gore London SW7 2EU
t +44 (0)20 7590 4126 f +44 (0)20 7590 4542 research@rca.ac.uk www.rca.ac.uk/research

be stored securely. In case of no Identification consent, once the information has been analysed all individual information will be destroyed.

If you have any concerns or would like to know the outcome of this project, please contact my supervisor Dr. Sam Jacoby or Ibon Bilbao at the above address.

Thank you for your interest.

I (*please print*) have read the information above and all queries have been answered to my satisfaction. I agree to voluntarily participate in this research and give my consent freely. I understand that I can withdraw my participation from the project up to the point of publication, without penalty, and do not have to give any reason for withdrawing.

I understand that all information gathered will be stored securely, and my opinions will be accurately represented. Any data in which I can be clearly identified will be used in the public domain only with my consent.

Participant Signature.....

Researcher Signature.....

Date:

Complaints Procedure:

This project follows the guidelines laid out by the Royal College of Art Research Ethics Policy.

If you have any questions, please speak with the researcher. If you have any concerns or a complaint about the manner in which this research is conducted, please contact the RCA Research Ethics Committee by emailing ethics@rca.ac.uk or by sending a letter addressed to:

The Research Ethics Committee
Royal College of Art
Kensington Gore
London
SW7 2EU

ANNEXE 2: COMMUNITY-LED PROJECTS DEVELOPED AS PRACTICE-BASED RESEARCH

LA QUINTA FORÇA COOPERATIVE HOUSING

1st prize public competition | IMHAB, 2020- ongoing | with Llinarquitectura

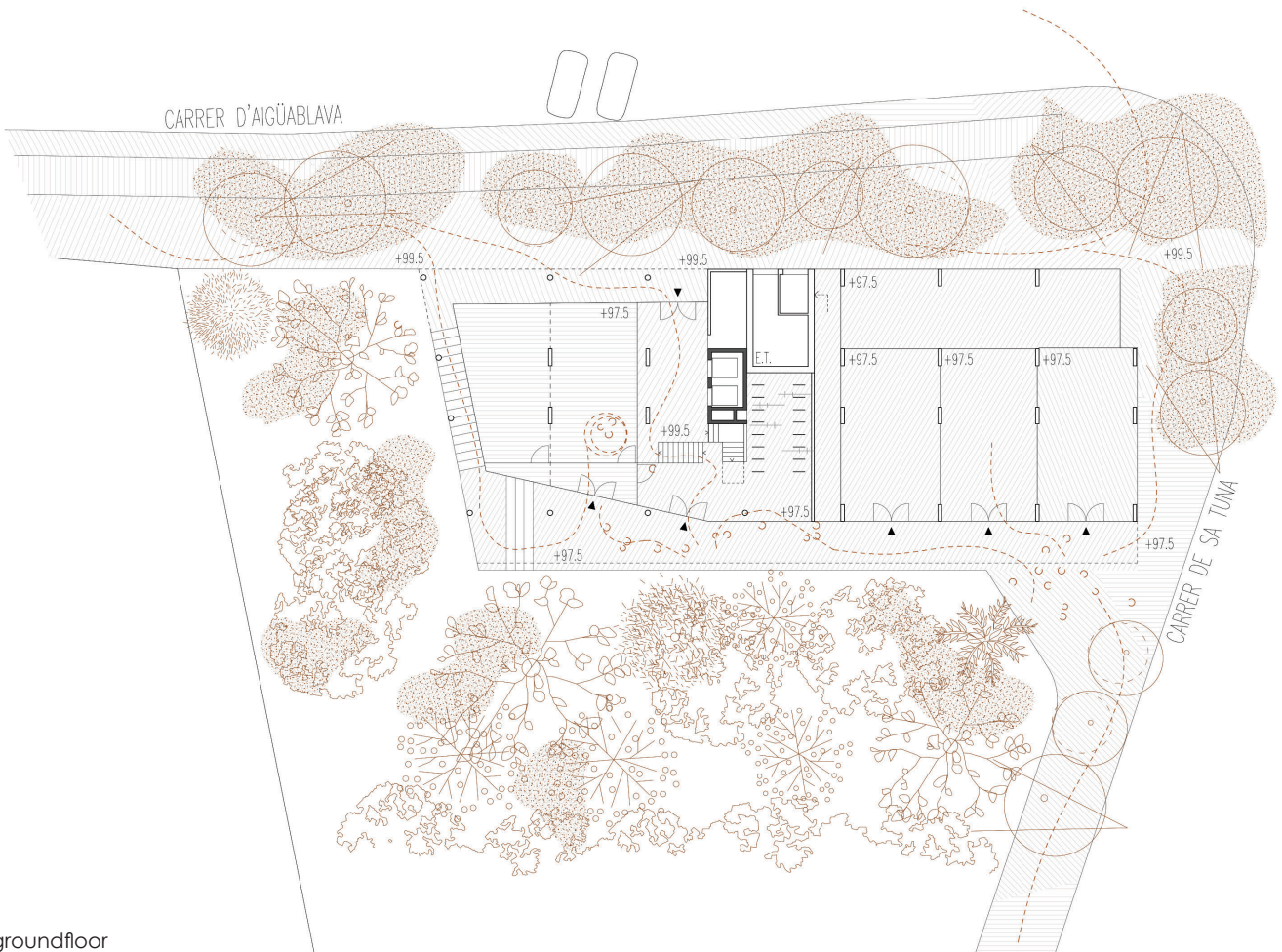


La Quinta Força is the cooperative housing project winner of a design competition in 2020 and currently under development. A cohabitation building is characterized by taking full advantage of the opportunity of living together. The building promotes the community and the activities that derive from it, strategically placing the common spaces. First of all, a ground floor open to the neighbourhood that hosts the accesses and the multipurpose spaces. Halfway up, a community terrace linked to common areas of the

cooperative such as the laundry facilities, a workroom and a library. Finally, on the upper deck, a multipurpose community room and a large outdoor umbrella under a photovoltaic deck, so that the entire community can enjoy the most privileged space in the building. These three spaces are connected by a double core of circulations: a vertical one and a staircase that walks along the elevated streets that provide access to housing units.



location in barcelona



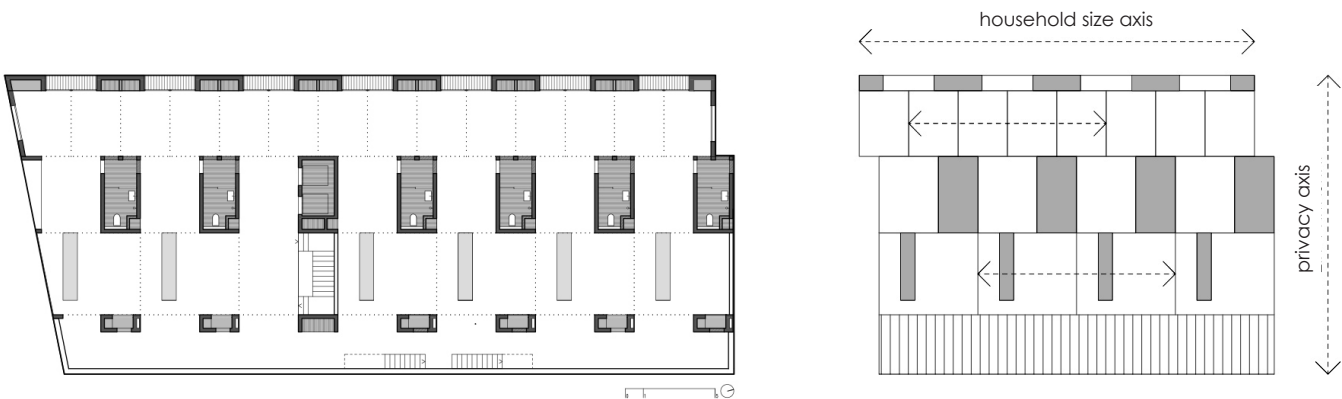
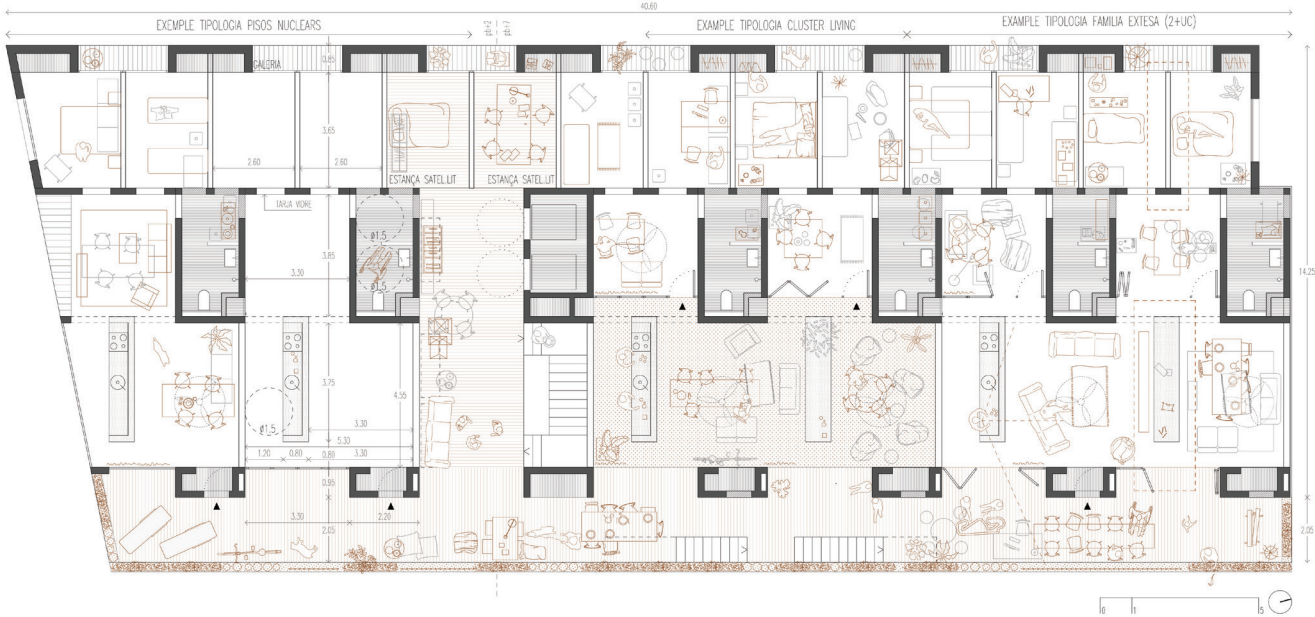
groundfloor

LA QUINTA FORÇA COOPERATIVE HOUSING

Most important is the role of the active user who is aware of what it means to live in a community. Thus, the user participates before, during, and after the work, in the decision-making, self-construction and management of the building once inhabited. The building will be the physical support of the cooperative, which will be completed by the action of the users and which will allow them to respond to future needs collectively. Through the green

façade, managed by the inhabitants themselves, the community builds the urban landscape from a biodiversity strategy. Sustainability criteria is applied, such as the use of passive energy systems, the reduction of the building's consumption and the treatment of the different water cycles. To minimize the environmental impact, priority is given to circular economy materials, recycled and that can be deconstructed.

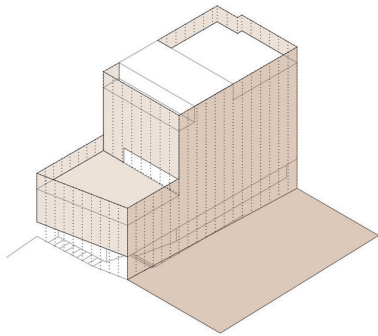




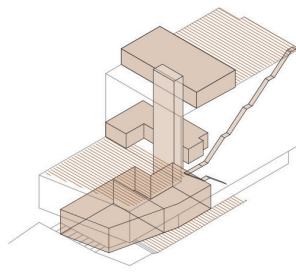
We do not know how we will live in the future. What we do know is that households' units are becoming more and more diverse. In addition, society faces challenges such as an ageing population, loneliness of the elderly, and climate emergency. We consider it essential to design sustainable housing that can evolve according to social

requirements, encourages networks of mutual support inside and outside the building, resilient communities and generational exchanges. The building is a process open to possible changes, a system that serves as a support for users to appropriate it and transform it.

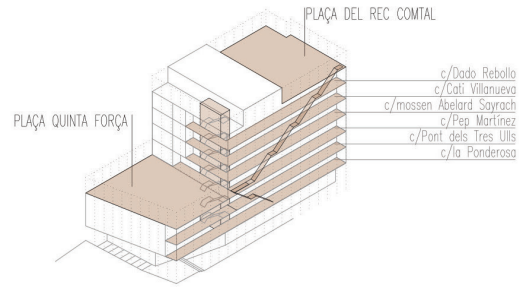
LA QUINTA FORÇA COOPERATIVE HOUSING



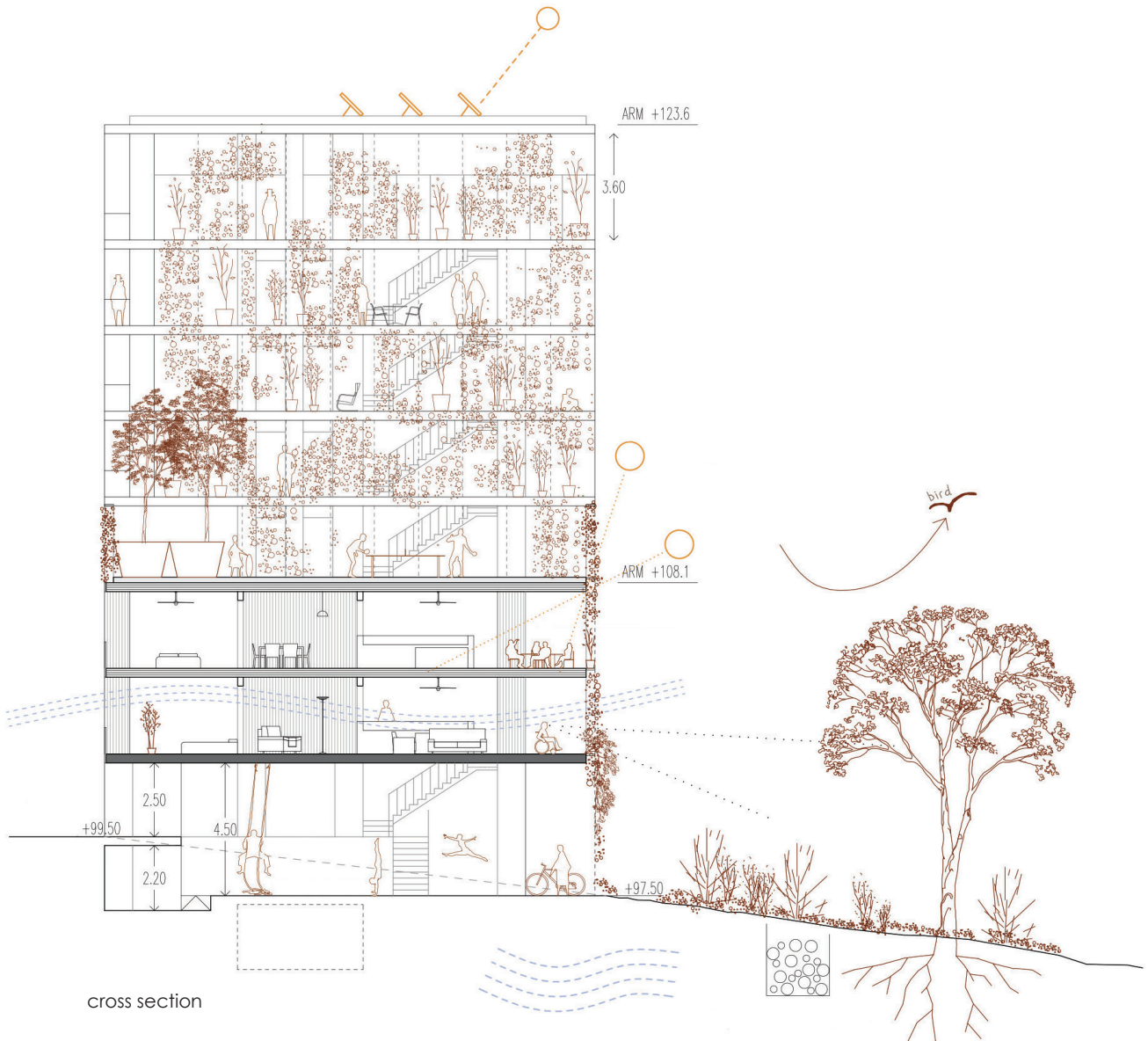
green façade



community spaces strategy



circulations



cross section

LA QUINTA FORÇA COOPERATIVE HOUSING

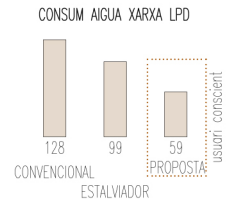
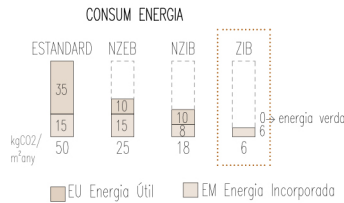
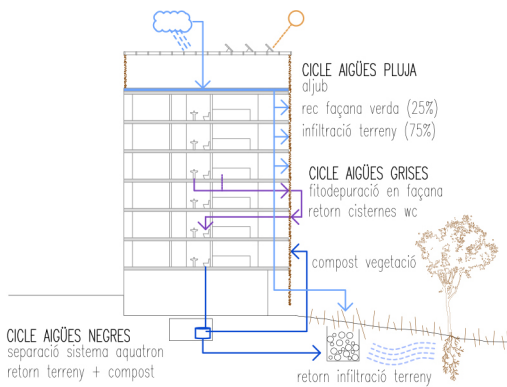
PUBLICATION:

Korean Institute of Architects. (2021). 100 Architects of the Year 2021. Seoul: the Korean Institute of Architects (KIA), pp.112-113. ISBN 9791186887103.

EXHIBITIONS:

International Invitational Exhibition at the KIA Convention, Seoul, "100 Architects of The Year 2021", hosted by the Korean Institute of Architects (KIA) and the Union of International Architects (UIA).

Catalan Architects Association, COAC Barcelona, exhibition "Living Differently. The experience of La Borda and the new cooperatives in Barcelona", 18.03-15.04.

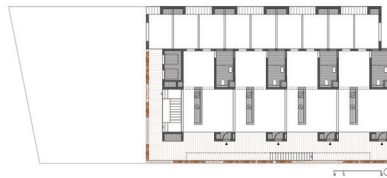


water strategy

expected energy consumption



floor 3



floors 4-6



floor 7



elevated streets

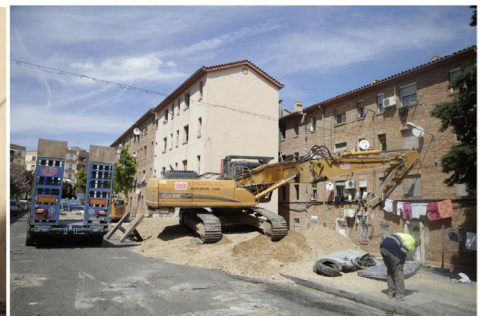


La Mariola: el barrio más pobre y estigmatizado de Lleida

La pobreza y los problemas son parte del día a día. La segregación, el estereotipo y la marginación promueven una espiral de la que parece imposible salir.

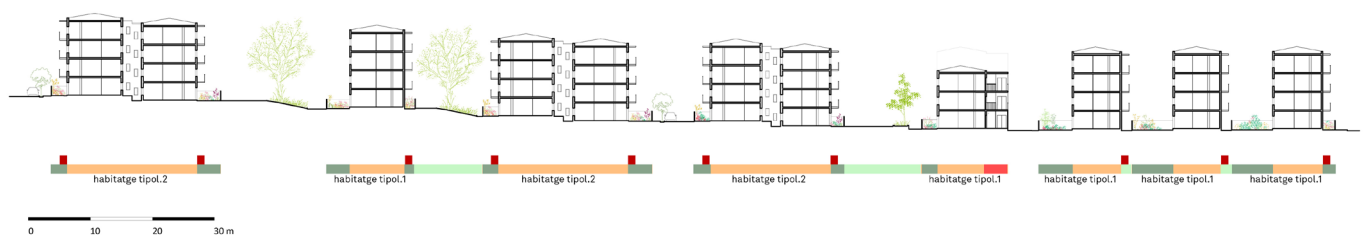


Viviendo del bomo de la Mariola, en Lleida. QUIRREY CASTELLO CERQUELA.
 LA MARIOLA (LLEIDA), 29/03/2020 09:33 - ACTUALIZADO: 29/03/2020 09:34

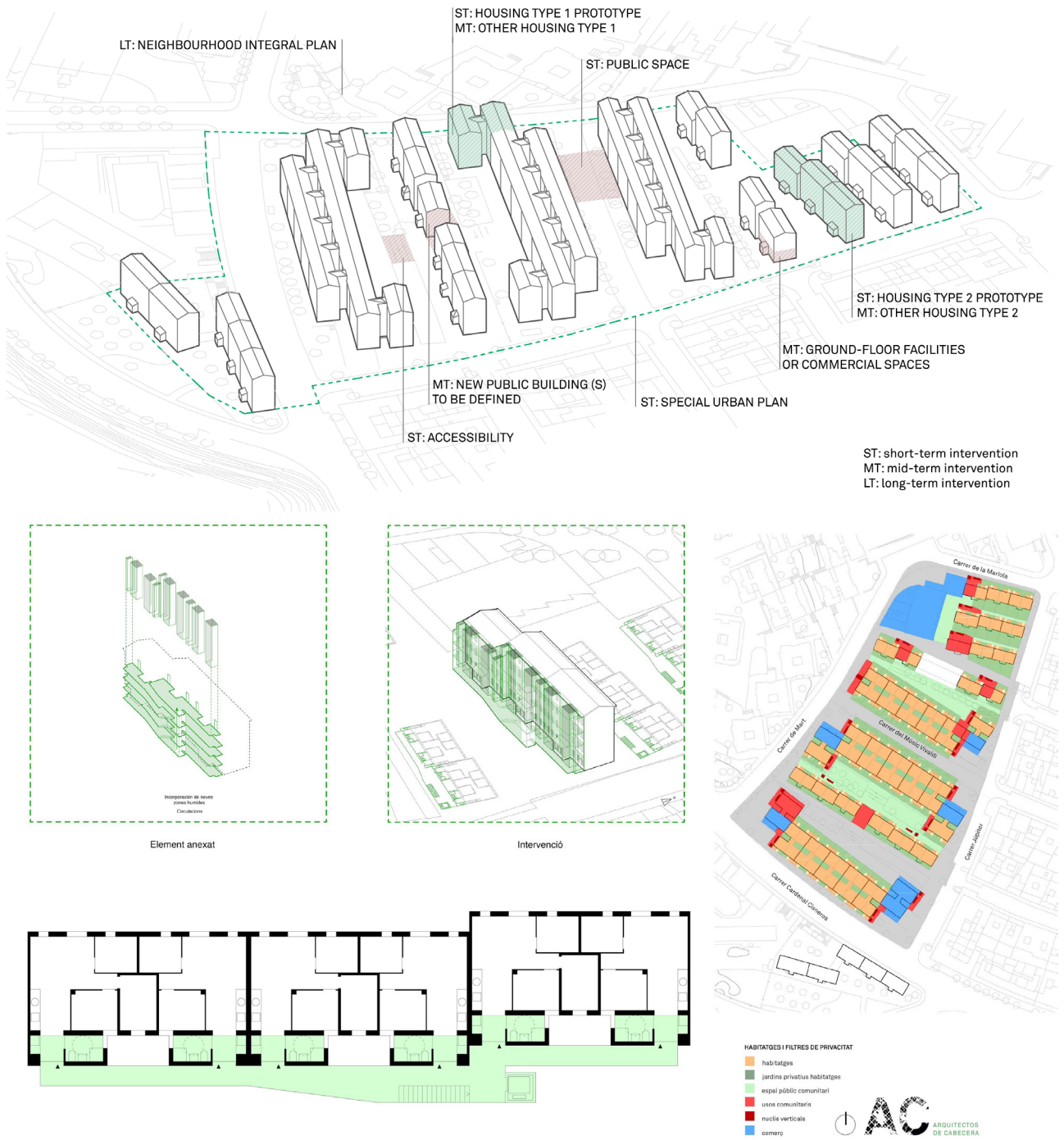


La Mariola Blocks in La Mariola neighbourhood, Lleida. Top left: aerial Google Earth view of the affected blocks. Top right: national newspaper Público on 29/03/2020: “La Mariola, the poorest and most stigmatised neighbourhood of Lleida. Poverty and problems are experienced daily. Segregation, stereotypes and marginalisation promote a spiral that it is impossible to leave”. Middle row left: Google Street View. Middle centre: façade of one of the blocks,

photo by author. Right: photo of the demolition of the buildings declared to be ruins, courtesy of Lleida Social Services department. Bottom: left: residents protest about the decay of the area, courtesy of Lleida Social Services department. Middle and right: pictures taken by the author during the three sessions of the “participative process” organised by the municipality in late 2018 and early 2019.



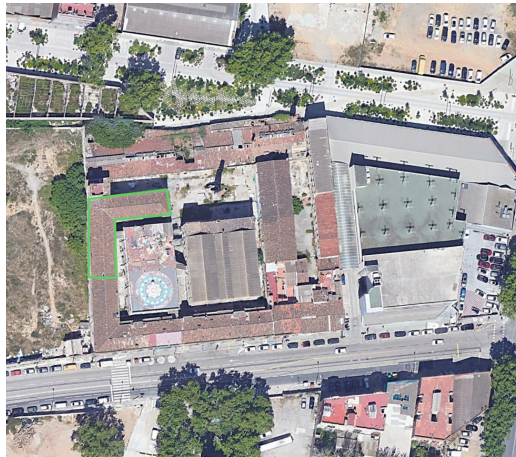
LA MARIOLA- LLEIDA NEIGHBOURHOOD REGENERATION



Regeneration of the La Mariola neighbourhood in the city of Lleida, specifically the so-called “Bloques La Mariola” (La Mariola housing blocks). These were built in the 1960s as part of the national social housing plans to develop so-called ‘housing polygons’, which became later privatised. Fifty years on, despite their central location in the city, they present a complex situation. They are socially stigmatised and have severe construction deficiencies, with some of the buildings classified by the municipality as “ruins” and demolished. To address this problem, the municipality started the urban regeneration project La Mariola 20.000. From 2018, I regularly met with different municipal departments over three years with the aim of

engaging with the municipality to approach the problem differently by challenging the standard urban regeneration processes . This was an unsuccessful attempt. AC team developed initial proposals that were shown to municipal planning and sustainability technical staff in April 2021. These proposals were based on a description of the process and a preliminary generic demonstration of what the interventions would look like, taking as a reference the group of housing blocks that Lacaton & Vassal had refurbished in France . As part of this proposal, further steps that needed to be taken in terms of the financial, social, urban and legislative aspects were identified.

WAREHOUSE L, LA ESCOCESA ART CREATION FACTORY
as Arquitectos de Cabecera | 2019-2021



Aerial view from la Escocesa complex, with Warehouse L highlighted. Source: google earth. Middle: street view in 2019.



Warehouse L as found.

Warehouse L belongs to the industrial complex of la Escocesa in Poble Nou neighbourhood, Barcelona, abandoned for many years and eventually partially reconverted into a self-managed creation centre. Despite being owned by the administration, it has been historically threatened in a neighbourhood that has been severely transformed in the past two decades under the 22@ masterplan, with constant accusations of memory erasure and severe gentrification. In 2019 it presented a complex and fragile scenario: it gathered an artists' community in the central buildings and a gypsy community and small workshops in the perimeter. In terms of buildings, only one of the warehouses was officially used by artists, while many were in poor condition.

The project aimed to recover a second warehouse for artists' studios. The first intervention in Warehouse L took place in summer 2019 when the space was used for an academic summer workshop as an exchange for its improvement during those weeks. The walls that covered windows and doors were demolished and a new connecting door was built with recycled materials. The space was inaugurated with a temporary spatial alteration, "air barricades", that enabled a rediscovery of the newfound space. During the following months after the workshop, several construction works took place to further adequate the space with the

participation of different stakeholders: from floor reparations developed professionally, to window construction by la Escocesa maintenance staff, to finally a two-day construction workshop gathered artists and architects to build partitions with recycled materials.

Given the scarcity of materials, achieving donations from museums and private companies became a crucial step for the success of the construction. This last intervention had to be removable and adaptable, so the use of (second hand) metal props became an optimal decision, which in addition to becoming a structural reinforcement since the first-floor roof structure was unstable, became an adaptable and appropriable system. Finally, artists started using the space and adapted to their needs.

As a result of the process, the warehouse could open in early 2020 with new artists' studios and shared spaces. Construction works took place a-legally with a minimum budget: 420 m² of the space were recovered with a budget of 48 €/m², way below the Spanish 1200 €/m² standard for public facilities, or any other standard for construction works.



Spatial alteration during ETSAB summer workshop in 2019, using inflatable architectures.



Several moments of the process: original state, construction phases, and finally artists' completion of the studios and space appropriation.



Decision-making meeting with the artist's association members and director.



Demolition works



Demolition, door construction, and studios construction process.



New door

WAREHOUSE L, LA ESCOCESA ART CREATION FACTORY



Window mock-up (left) and details (middle and right), photos by Gabriele Basilico.

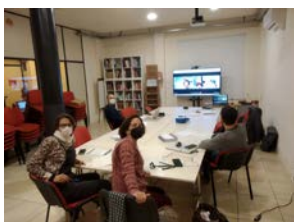


Images from studios before artists' appropriation, photos by Gabriele Basilico.



Warehouse L a year after the construction of the studios. Some studios were easily reconfigured thanks to the assembly system.

ANNEXE 3: TOOLKIT AS INSTRUMENT FOR THE ANALYSIS OF 23 WORKS IN BARCELONA



Top-down: toolkits Version 3, Lacol (2 images), Arqbag, Celobert, TTAC ETSAB (2 images).
Right: sessions diagram.

Analysis sheets of collaborative works, developed for this thesis through Participatory Action Research:

HOUSING

NEW HOUSING MODELS

- W01 ATRI + APROP Tactical Accomodations
- W02 La Borda Cooperative Housing
- W03 Cirerers Cooperative Housing
- W04 Guimerà Senior Cohousing

REFURBISHMENT

- W05 Pas a Pas les Planes
- W06 Community Energy Refurbishment (REC)
- W07 Lancaster, 'Guernika'

FACILITY

RECOVERY INDUSTRIAL HERITAGE

- W08 Can Batlló Complex
- W09 Warehouse 11
- W10 Coopolis Phase 0
- W11 Arcadia School
- W12 Can 60
- W13 La Escocesa Warehouse L

EXTENSION/TRANSFORMATION EXISTING

- W14 (e)co Platform
- W15 Pere Grau Space
- W16 Coeducative Playgrounds

TEMPORAL APPROPRIATION

- W17 Bocachica

PUBLIC SPACE

SKATEPARKS

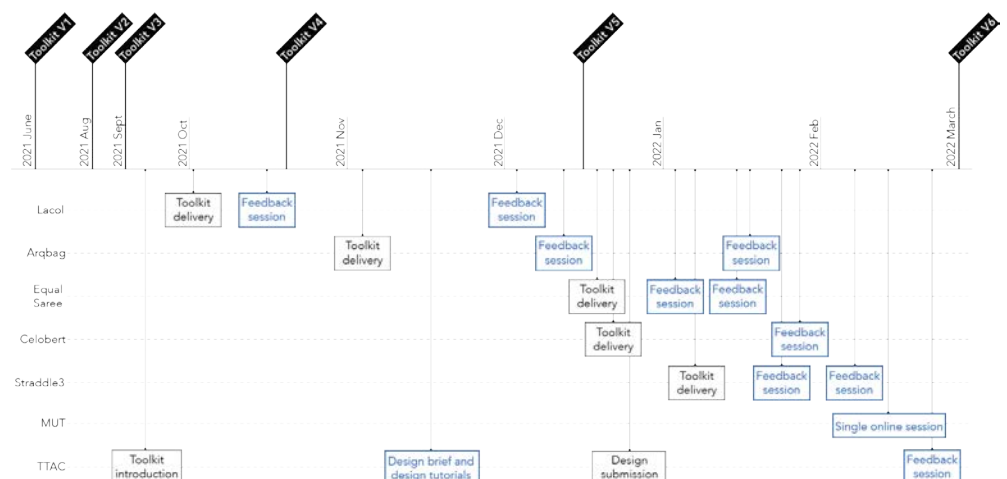
- W18 SK8+U Arbúcies
- W19 La Santa Urban Sports Park
- W20 Moviment Obrer Square

SQUARE AND STREETS

- W21 Baró Square
- W22 Ringo Rango Route

TEMPORAL APPROPRIATION

- W23 Safaretjos



STAKEHOLDERS ATRI SYSTEM

Civic engagement	Local community, depending on project
Public administration	Local administration, depending on project
Community architects	ATRI TEAM: David Bravo, Alex Giménez, Straddle3 and Eulia.eu (architects), Pablo Feu and Anabel Garcia (lawyers) and la Hidra cooperative (social transformation research)
Private stakeholders	Could be potentially included, depending on the project

STAKEHOLDERS APROP SYSTEM

Civic engagement	-
Public administration	Municipality of Barcelona (Tonet Font)
Community architects	Straddle3, Lacol and Bestanten-Hormias architects (containers), Straddle3, Yaiza Terré and Eulia Arkitektura (Raval building)
Private stakeholders	-

CONTEXT & AIMS

The Agrupacions Tàctiques de Repoblament Inclusiu (ATRI, Tactical Accommodations of Inclusive Repopulation) is an urban voids filling strategy that instrumentalises affordable housing for urban improvement at different levels. ATRI understands construction as a social project and an opportunity for distributing economic impact at every point in the procurement process: from access to land (refilling urban voids), public tenure competitions (in small companies), design and construction (based on Habraken's theory of supports and an assisted do it yourself/do it with others process) and self-management.

ATRI's first test location was in 2015, addressing the challenging situation of the Gimnàs Social Sant Pau (Sant Pau Community Gym), a cooperative social project in the form of a gym, whose continuity was threatened due to economic difficulties. The project aimed to guarantee protection for the building, a historical casa-fàbrica (house-factory) and the financial stability of the cooperative through the building of affordable housing units above the existing building.

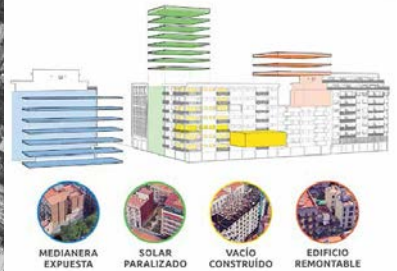
Gimnàs Social Sant Pau encouraged the municipality to buy the land and allow the cooperative to build and lease the apartments with surface rights for 15 years: 30% of the units would have been designated as emergency homeless shelters. Taking American politician Bernie Sanders' Community Land Trust (CLT), established in the 1980s in Vermont, United States, as a model, ATRI Sant Pau would have represented the first rental cooperative in Barcelona. Although the proposal never came to fruition, it evidenced the feasibility of the tactical housing approach known as "urban dentistry" and its potential to be implemented elsewhere in the city. Feasibility studies are currently being developed in the Poblenou neighbourhood.

A few years later, the municipality saw an opportunity to implement a number of ATRI features by developing the public emergency homeless shelters Allotjaments de Proximitat Provisionals (APROP, Proximity Provisional Lodgings). APROP is based on the temporary use of underdeveloped vacant land to accommodate people affected by the housing emergency, and by doing so to foster the circular economy. The industrial approach and low-emission construction is based on shipping container units, which turns the building into a nomadic structure that can be placed on plots of land that qualify as a public facility, pending development.

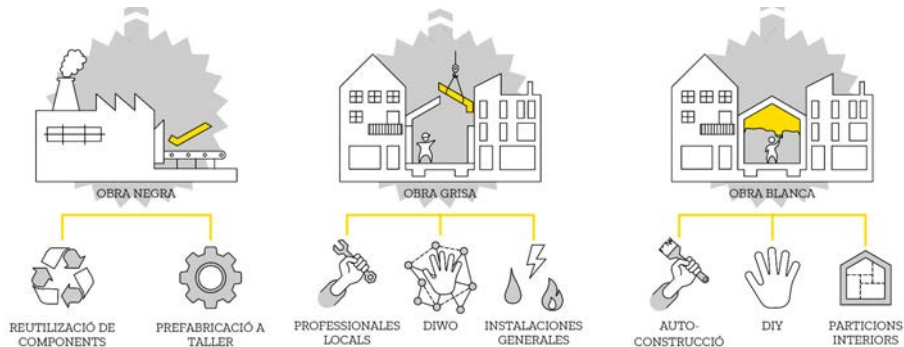
The ATRI team is currently developing two projects. On the one hand, there is Wikihousing (wikihousing.eu), as an adaptation of the system to be applied in Barcelona on a larger scale with municipal support. Secondly, a new building for housing young people in Caldes de Montbui, near Barcelona, is currently in the construction phase. Caldes ATRI included a co-design approach, and is built with sustainable materials, including prefabricated container units and Cross Laminated Timber (CLT) wood panels.



Left: Sant Pau Community Gym's swimming pool was built under the existing house factory in a structural effort. Right: Section of ATRI Sant Pau.

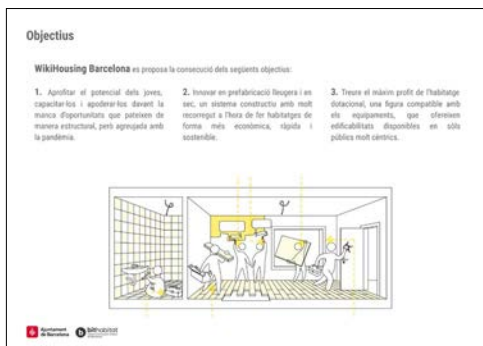
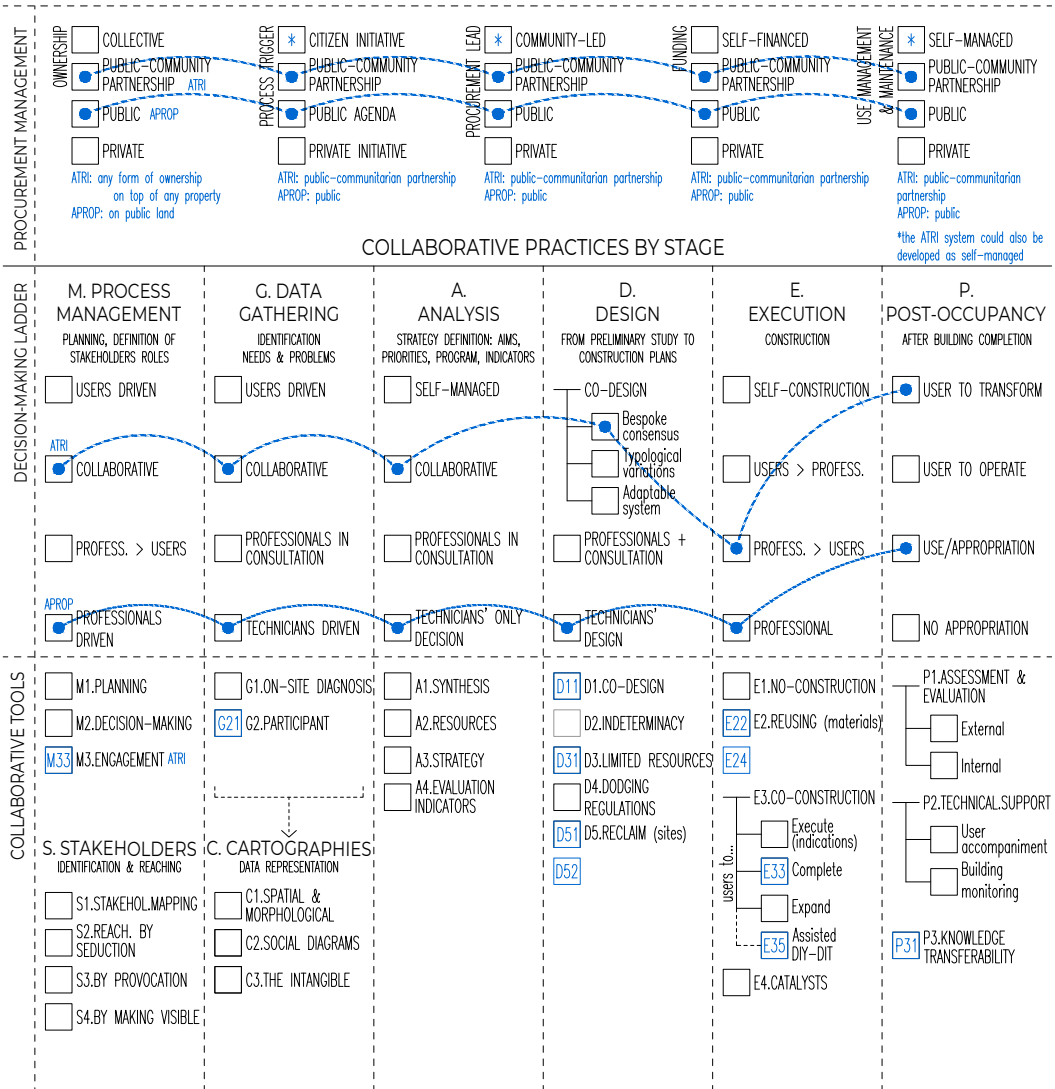


ATRI system feasibility studies.



ATRI construction phases.

ATRI + APROP



Wikihousing.

COLLABORATIVE TOOLS ATRI SYSTEM

G21

Data gathering > Diagnostic workshops

For example, with future dwellers and local associations. In ATRI Sant Pau, with the Sant Pau Social Gym (workers cooperative) and Raval associations. In the case of Caldes, with a youth association.

M33
D11

Process management > Discussion workshops + Design > Co-design workshops

ATRI system includes dwellers in decision-making in different stages of the project, including co-design workshops.

D52
E24

Design > Filling in the gap + Execution > Parasite

"Urban dentistry" through completing vacant building volumes.

E22

Execution > Recycling & reclaiming components

Prefabricated construction with shipping containers.

E33
E35

Execution > User to complete + Collective assisted DIY-DIT

Three stages: black (prefabricated), grey (on site, local professionals with do-it-with-others) and white (do it yourself)

P31

Post-occupancy > Manuals & toolkits

To broadcast the model and allow implementation elsewhere.

COLLABORATIVE TOOLS APROP SYSTEM

D31

Design > Intermediary situations: "the meanwhile"

Container construction turns the building into a potentially nomadic infrastructure.

D51

Design > Reclaiming empty plots

Temporary use of underdeveloped plots qualified as public facility.

E22

Execution > Recycling & reclaiming components

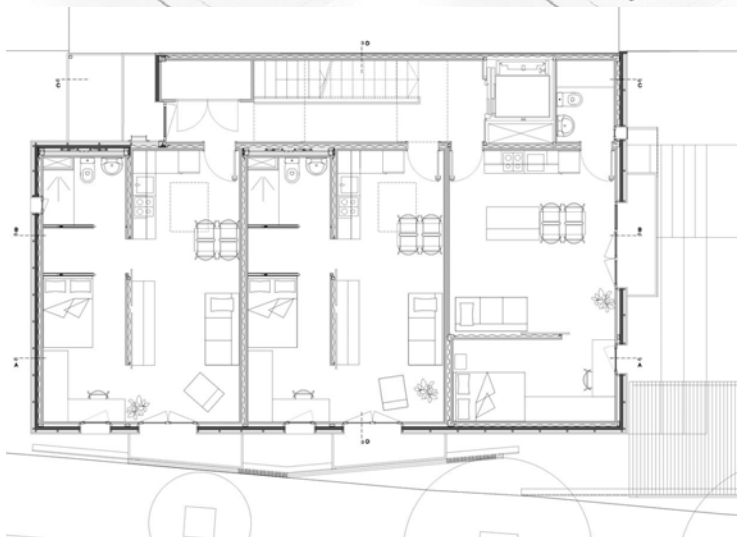
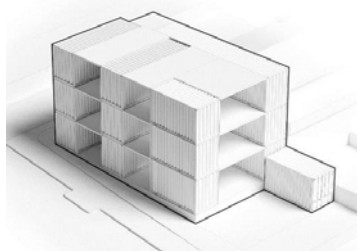
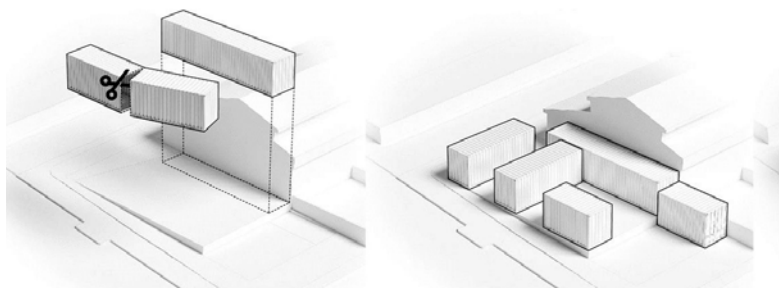
Reuse of shipping containers.



APROP Ciutat Vella: Container housing units were designed collaboratively by Straddle3, Lacol and Bestranten-Hormias architects with one-container and two-container modules. These industrialized elements could be piled up and linked to a circulation core in multiple dispositions. The first building was completed in 2019 in Ciutat Vella neighbourhood, designed by Straddle3, Yaiza Teré and Eulia Arkitektura (images and plan).

W01

ATRI + APROP TACTICAL ACCOMMODATIONS



W. WORKS | HOUSING

Youth Housing Caldes:

OUTCOMES

The ATRI project evidences the possibilities that derive from approaching design as a system, rather than as a single building. While the latter relies on form, the ATRI system explores the opportunities that emerge from different scenarios, from ownership schemes to the kind of land that is available. As a system, the overall ATRI strategy can be implemented with multiple variations that emerge from specific local contexts, in terms of both formal and procurement strategies, as in the case of Sant Pau, or Caldes. In this regard, ATRI aims to create an impact in each of its procurement phases by including stakeholders in decision-making in relation to strategy, design and construction, including the local economy and the social fabric. Since ATRI is ultimately a process, the method is adaptable to the specific context, making the most of the opportunities it offers.

The comparison of ATRI and APROP enables a discussion of the opportunities and limitations that emerge from a system adapted to two different forms of procurement (community-led and public-led) and users (long-term and short-term). APROP retains some features of the original ATRI proposal, such as the prefabricated construction, the reclaiming of empty plots and social impact, but it also presents fundamental differences. The APROP municipality-led process, the procurement through standard mechanisms of emergency shelter provision, and the temporary status of residents derive from a more conventional procurement process in which residents are not included in decision-making, nor in co-design or co-construction. In other words, while ATRI aims to be a self-managed and community-led building, APROP is a specific type of public housing (highly experimental) unit that operates as a public facility with the aim of achieving a stronger social impact on its surroundings than that of typical social housing buildings, and challenges conventional forms of social housing procurement and construction.

More information:

ATRI: www.atri.city

APROP: www.ajuntament.barcelona.cat/dretssocials/es/innovacion-social/aprop
www.straddle3.net/es/proyectos/aprop-allotjaments-de-proximitat-a-ciutat-vella-barcelona

ATRI Sant Pau: www.straddle3.net/es/proyectos/habitem-el-sant-pau

ATRI Poblenou: [www.straddle3.net/es/proyectos/](http://www.straddle3.net/es/proyectos/implementacion-sistema-atri-en-poblenou)
[implementacion-sistema-atri-en-poblenou](http://www.straddle3.net/es/proyectos/implementacion-sistema-atri-en-poblenou)

Youth Housing Caldes: www.straddle3.net/es/proyectos/habitatge-jove-caldes.
www.habitatgejovecaldes.cat

Images: courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	La Borda's residents, Can Batlló social movement
Public administration	Municipality of Barcelona (cession of plot)
Community architects	Lacol cooperative of architects
Technical staff	Arkenova (engineer), Miguel Nevado (structure), AumedesDAP (DEO), Societat Orgànica (environmental engineer), PAuS – Coque Claret and Dani Calatayud (consultants), Grisel·la Iglesias – Àrea acústica, José Juan Martínez Larriba (project manager), La Ciutat Invisible (coordinator) and Holon (services design)

CONTEXT & AIMS

La Borda is a self-organised housing cooperative that aims to guarantee access to decent, non-speculative housing. It aims to place use value at its centre through a collective structure. The idea of a housing cooperative started in 2012 as a community initiative resulting from Can Batlló (W08), that promoted the recovery of the industrial site and of the fabric of the neighbourhood and a cooperative structure in the neighbourhood of Sants. The project is located on a public plot of land, making the housing units qualify as protected housing, leased by the City Council for 75 years. The plot is positioned on the border of the Can Batlló complex and the historic Bordeta neighbourhood. There are three intersecting principles of the project:

- (1) Redefining collective housing. The building programme proposes 28 houses (40, 60 and 75 m²) and communal spaces that allow private space to be extended into public space and that enhance community and neighbourhood life.
- (2) Sustainability and environmental quality. La Borda has been built with the minimum environmental impact, both during construction and the lifetime of the building. The goal is to achieve comfort in domestic spaces with minimum energy consumption.
- (3) User participation. Self-promotion and subsequent collective management mean that the participation of future users in the process (in design, construction and use) is the most important and distinctive variable of the project.

During the design, participation was articulated through the user working group on architecture, which was the link between the technical team and the general assembly of La Borda. This working group was in charge of preparing the architecture workshops. Several co-design workshops included discussions on the visual aspects of the project, the project's programme and strategy, the environmental strategy, typology, sessions for the validation of the preliminary project and detailed sessions on specific elements of the project. A distinctive feature of the project is that architects were involved in social activism in Can Batlló, meaning that they had belonged to the core group of La Borda from the beginning.

— excerpts from the project description from the website, translated by the author.



La Borda organizational diagram (left) and as built (right).



La Borda typical plan and housing units system. Bottom right: housing units layout as derived from consensus co-design workshops: S, M, L sizes.

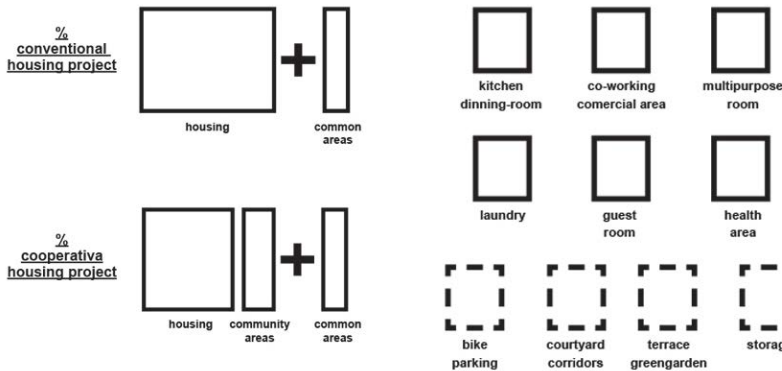
W02 LA BORDA COOPERATIVE HOUSING

LA BORDA COOPERATIVE HOUSING

PROCUREMENT MANAGEMENT			
OWNERSHIP <input type="checkbox"/> COLLECTIVE <input checked="" type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <i>building in cooperative ownership in public land</i>	PROCESS TRIGGER <input checked="" type="checkbox"/> CITIZEN INITIATIVE <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC AGENDA <input type="checkbox"/> PRIVATE INITIATIVE <i>social movement from Can Batlló</i>	PROCUREMENT LEAD <input checked="" type="checkbox"/> COMMUNITY-LED <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <i>dwellers form a housing cooperative</i>	FUNDING <input type="checkbox"/> SELF-FINANCED <input checked="" type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <i>multiple sources, including dwellers, public grants, public land</i>
		USE MANAGEMENT & MAINTENANCE <input checked="" type="checkbox"/> SELF-MANAGED <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <i>by dwellers in housing cooperative</i>	

COLLABORATIVE PRACTICES BY STAGE

DECISION-MAKING LADDER		COLLABORATIVE TOOLS			
M. PROCESS MANAGEMENT PLANNING, DEFINITION OF STAKEHOLDERS ROLES <input type="checkbox"/> USERS DRIVEN <input checked="" type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESS. > USERS <input type="checkbox"/> PROFESSIONALS DRIVEN	G. DATA GATHERING IDENTIFICATION NEEDS & PROBLEMS <input type="checkbox"/> USERS DRIVEN <input checked="" type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESSIONALS IN CONSULTATION <input type="checkbox"/> TECHNICIANS DRIVEN	A. ANALYSIS STRATEGY DEFINITION: AIMS, PRIORITIES, PROGRAM, INDICATORS <input type="checkbox"/> SELF-MANAGED <input checked="" type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESSIONALS IN CONSULTATION <input type="checkbox"/> TECHNICIANS' ONLY DECISION	D. DESIGN FROM PRELIMINARY STUDY TO CONSTRUCTION PLANS CO-DESIGN <input checked="" type="checkbox"/> Bespoke consensus <input checked="" type="checkbox"/> Typological variations <input type="checkbox"/> Adaptable system <input type="checkbox"/> PROFESSIONALS + CONSULTATION <input type="checkbox"/> TECHNICIANS' DESIGN	E. EXECUTION CONSTRUCTION <input type="checkbox"/> SELF-CONSTRUCTION <input type="checkbox"/> USERS > PROFESS. <input checked="" type="checkbox"/> PROFESS. > USERS <input type="checkbox"/> PROFESSIONAL	P. POST-OCCUPANCY AFTER BUILDING COMPLETION <input checked="" type="checkbox"/> USER TO TRANSFORM <input checked="" type="checkbox"/> USER TO OPERATE <input checked="" type="checkbox"/> USE/APPROPRIATION <input type="checkbox"/> NO APPROPRIATION
<input type="checkbox"/> M1.PLANNING <input type="checkbox"/> M2.DECISION-MAKING <input checked="" type="checkbox"/> M3.ENGAGEMENT S. STAKEHOLDERS IDENTIFICATION & REACHING <input type="checkbox"/> S1.STAKEHOL.MAPPING <input type="checkbox"/> S2.REACH. BY SEDUCTION <input type="checkbox"/> S3.BY PROVOCATION <input type="checkbox"/> S4.BY MAKING VISIBLE	<input type="checkbox"/> G1.ON-SITE DIAGNOSIS <input checked="" type="checkbox"/> G2.PARTICIPANT <input checked="" type="checkbox"/> G22 C. CARTOGRAPHIES DATA REPRESENTATION <input type="checkbox"/> C1.SPATIAL & MORPHOLOGICAL <input checked="" type="checkbox"/> C2.SOCIAL DIAGRAMS <input checked="" type="checkbox"/> C24 <input type="checkbox"/> C3.THE INTANGIBLE	<input type="checkbox"/> A1.SYNTHESIS <input checked="" type="checkbox"/> A2.RESOURCES <input checked="" type="checkbox"/> A31 <input type="checkbox"/> A4.EVALUATION INDICATORS	<input checked="" type="checkbox"/> D11 <input checked="" type="checkbox"/> D21 <input checked="" type="checkbox"/> D22 <input checked="" type="checkbox"/> D23 <input checked="" type="checkbox"/> D24 <input checked="" type="checkbox"/> D25 <input type="checkbox"/> D3.LIMITED RESOURCES <input checked="" type="checkbox"/> D41 <input type="checkbox"/> D5.RECLAIM (sites)	<input type="checkbox"/> E1.NO-CONSTRUCTION <input checked="" type="checkbox"/> E22 <input type="checkbox"/> E3.CO-CONSTRUCTION <input type="checkbox"/> Execute (indications) <input checked="" type="checkbox"/> E33 Complete <input type="checkbox"/> Expand <input checked="" type="checkbox"/> E35 Assisted DIY-DIT <input type="checkbox"/> E4.CATALYSTS	<input type="checkbox"/> P1.ASSESSMENT & EVALUATION <input checked="" type="checkbox"/> P12 External <input checked="" type="checkbox"/> P13 Internal <input type="checkbox"/> P2.TECHNICAL.SUPPORT <input checked="" type="checkbox"/> P21 User accompaniment <input checked="" type="checkbox"/> P22 Building monitoring <input checked="" type="checkbox"/> P31 <input type="checkbox"/> P3.KNOWLEDGE TRANSFERABILITY



Private and shared spaces in a conventional project and in la Borda, as agreed with dwellers. The management of resources included strategical allocation of spaces.

COLLABORATIVE TOOLS

M32

Process management > Involving decisive partners

La Borda emerged from Can Batlló grassroots movements' historical claims. An agreement with the municipality in 2014, under Xavier Trias' government, became the starting point.

**G21
G22**

Data gathering > Diagnostic workshops + Meetings with stakeholders

It allowed dwellers to gain a basic technical knowledge, spatial understanding and vocabulary on architecture. Activities included explanations by architects and users' redrawing of their houses. The 'architecture workgroup' of la Borda, formed by future dwellers, acted as a mediator between teams of technical staff and the general assembly of the cooperative.

**C23
C24**

Projective cartography > Users' needs (I): individual + Users' needs (II): collective

Interviews allowed to determine users' specificities at a level of household needs, energetic performance, and financial situation.

A21

Analysis & Strategy > Financial analysis & co-finance strategies

Interviews allowed to determine the users' financial situation. As a key strategy, the building was feasible thanks to a co-finance campaign.

A31

Analysis & Strategy > Strategic action plan

Driving ideas were collectively defined as guidelines to be followed throughout the process.

D11

Design > Co-design workshops

Spanning from general activities, such as an imaginary pin-up, to specific ones, such as working with models and plans.

**D21
D22**

Design > Enabling: user appropriation + Enabling: user manipulation

Users operate the greenhouse covering the central patio. In addition, the soft facade allows user appropriation and manipulation, and corridors are designed to be appropriated by users.

**D23
D41**

Design > Enabling: adaptable system + Legislative blind spot

Interchangeable rooms between units are registered as collective spaces, a naming responding to circulation spaces. With that strategy, rooms are not bound to specific dwellings.

D24

Design > Typological variations

Housing units are defined as S, M, L sizes to accommodate different household sizes, not determining the composition.

D25

Design > Multiple scenarios

The generosity of the room sizes allows a number of different subdivisions to respond to different potential users' needs. In addition, certain rooms can change access between adjacent dwellings.

E22

Execution > Recycling & reclaiming components

Certain elements such as the pavement in the shared kitchen of the groundfloor are built with leftover CLT wood from upper floor construction.

**E33
E35**

Execution > User to complete + Collective assisted DIY-DIT

Some parts of the building were self-built by dwellers and sympathisers of the project. In addition, certain elements were finished by dwellers during inhabitation, to save costs.

P12

Post-occupancy > External evaluation: stakeholder review

The commission of architecture developed process review workshops, which included a process review diagram.

P13

Post-occupancy > Internal evaluation: tools & methods

La Borda was analysed as part of the larger social struggle of Can Batlló, including stages and activities.

**P21
P22**

Post-occupancy > Post-occupancy technical support + Building monitoring

Architects met residents regularly and carried out accompaniment tasks during inhabitation. In addition, the energetic performance of the building was monitored.

P31

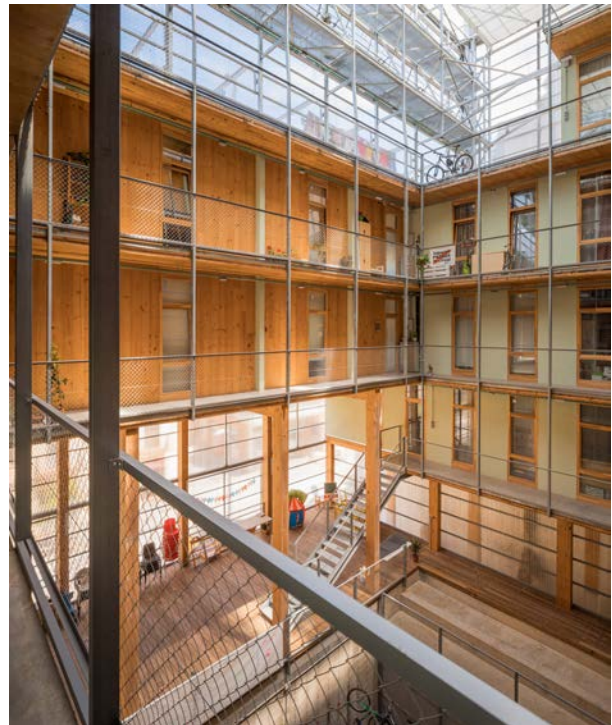
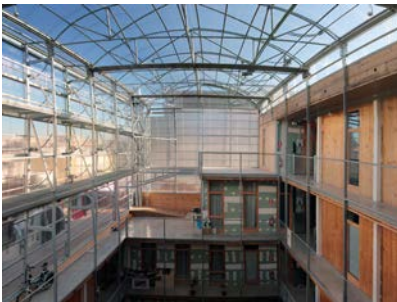
Post-occupancy > Manuals & toolkits

Iacol published two books about their experience: *Building Collectively* (2018) and *Habitar en Comunidad* (2018, co-authored with La Ciutat Invisible).

W02 LA BORDA COOPERATIVE HOUSING



Top left: La Borda co-design workshops. Bottom: Drawings from workshops.



W. WORKS | HOUSING

La Borda as built.

OUTCOMES

La Borda became a keystone in the implementation of the cooperative housing model in Barcelona for several reasons: first, by challenging given cultural assumptions about ownership, households and collective housing typology and second, by becoming a catalyst for legislative change, with new regulations such as "surface rights" (the leasing of public land for cooperative housing projects) and "cession of use" (legal agreement between the cooperative and its residents for the use of its facilities) to allow the use of public land for cooperative buildings and collective property and the suspension of the legal requirement to provide car parking spaces in cooperative housing projects. The experimentation carried out at la Borda, in terms of both typology and construction of the building entailed a process of navigating outdated regulations, for example in rooms that can belong to adjacent dwellings, and the greenhouse (Avilla-Royo, Jacoby and Bilbao, 2021). Third, in 2016 the technical teams that supported la Borda, Lacol and La Ciutat Invisible created the foundation la Dinamo, which develops tools and promotes the cooperative housing model. Furthermore, la Borda is creating a pedagogical impact on its residents, in relation to their environmental awareness of the building and the process of living collectively, which strengthens mutual support networks. The pedagogical effect also impacts visitors to the building, including public housing agencies, who see in la Borda the positive impact of Cross Laminated Timber (CLT) construction and passive energy systems, and gain an understanding of the proactive approach by residents. Finally, after the experience of la Borda the municipality held public competitions in 2017 and 2020 for developing further cooperative housing projects on public land.

More information:

'Sustainable building, sustainable living: La Borda, Barcelona by Lacol', *Architects' Journal*, (2020).

'Cooperativa de vivienda La Borda', *Arquine*, 94 (2020)

Montaner, J.M. (2020) 'La arquitectura de la Borda: contexto, gestión y forma', *Summa+*, 176, pp.102-113.

'Can Batlló', *BauNetzWOCHE* (2020)

'Wohnen in Barcelona / Living in Barcelona', *Detail* (2020)

"Cooperativa de vivienda La Borda", PLOT, nr. 50 (agost/setembre).

Avilla-Royo, R., Jacoby, S. and Bilbao, I. (2021) 'The Building as a Home: Housing Cooperatives in Barcelona'. *Buildings*, 11(4), p.137.

Images courtesy of Lacol Architects cooperative. Photographs by Lacol and Lluç Miralles.

STAKEHOLDERS

Civic engagement	Sostre Civic housing cooperative (as developer)
Public administration	Municipality of Barcelona (cession of plot)
Community architects	Celobert cooperative of architects
Technical staff	Jorge Blasco – Estudi M103 (structures), Àurea acústica, and Grup Nou (construction manager)

CONTEXT & AIMS

The Cirerers cooperative housing project emerged from a competition for the leasing of public land for cooperative housing promoted by Barcelona City Council in 2017 and completed in 2022. Thus, the land is owned by the municipality and the building belongs to the cooperative Sostre Civic, which acted as the developer and intermediary between the City Council, the residents and the technical staff. Its co-design project included users at all stages. In addition, almost all the companies involved in the project emerge from the Social and Solidarity Economy: architecture, engineering, promotion, construction, group management, financing and insurance.

Collective and community spaces give meaning and identity to the social project and become the central element of the architectural co-design process. In the case of Cirerers, four types of spaces are proposed, which are defined by their degree of openness and connection with the community:

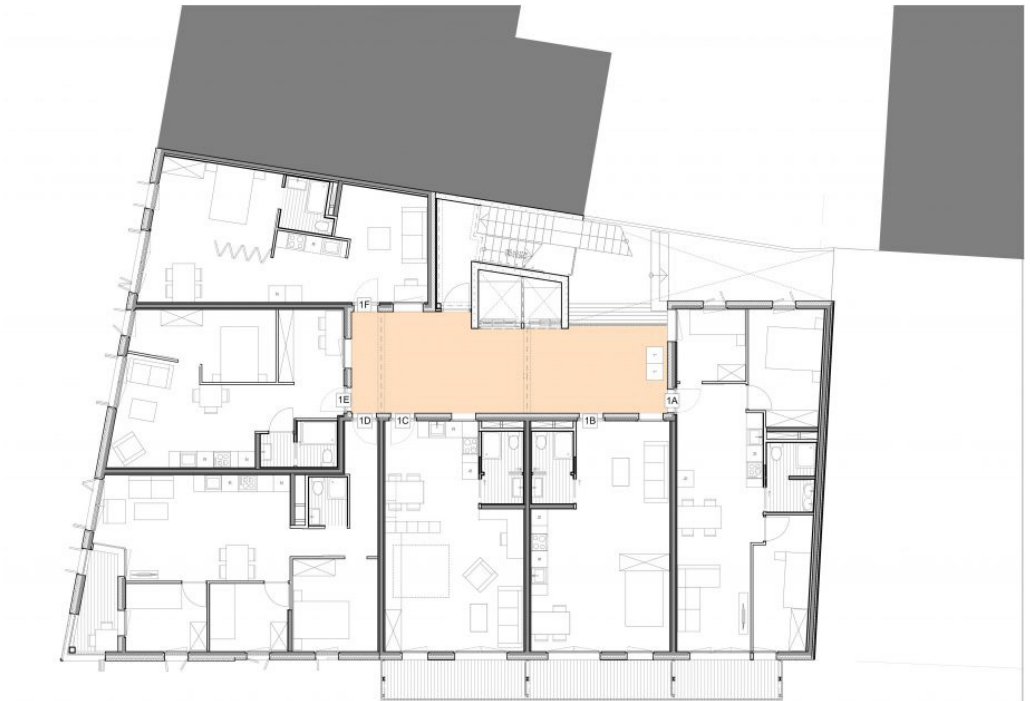
- Open spaces for the neighbourhood, located on the ground floor: cooking and catering workshop-school where local women can train.
- Spaces for community use defined by users: 240 m² of community space on the ground floor and 240 m² of outdoor terraces. The latter are located on the roofs of the 3rd, 6th and 7th floors and can be used as a community dining room, for outdoor recreational activities and as a garden.
- Spaces for collective use: intermediate collective space, between private and communal. Defined as a “street-landing”, 240 m² are distributed over six floors. These access streets contain shared laundries and areas to be appropriated in front of the flats.
- Spaces for private use: the building has a total of 32 dwellings: 22 x 40-45 m² units, 10 x 60-65 m² dwellings.

The construction process involved in Cirerers has generated a minimal environmental footprint and incorporates efficient and renewable facilities, having been designed so that the environmental cost associated with the manufacture, transport, commissioning and future recycling of the building will be minimal: this includes during occupancy. It has reached Passive House efficiency standards, as an almost zero-consumption building (nZEB) that goes further than what is required by current energy-saving regulations.

– Taken from Celobert website, translated and adapted by the author.



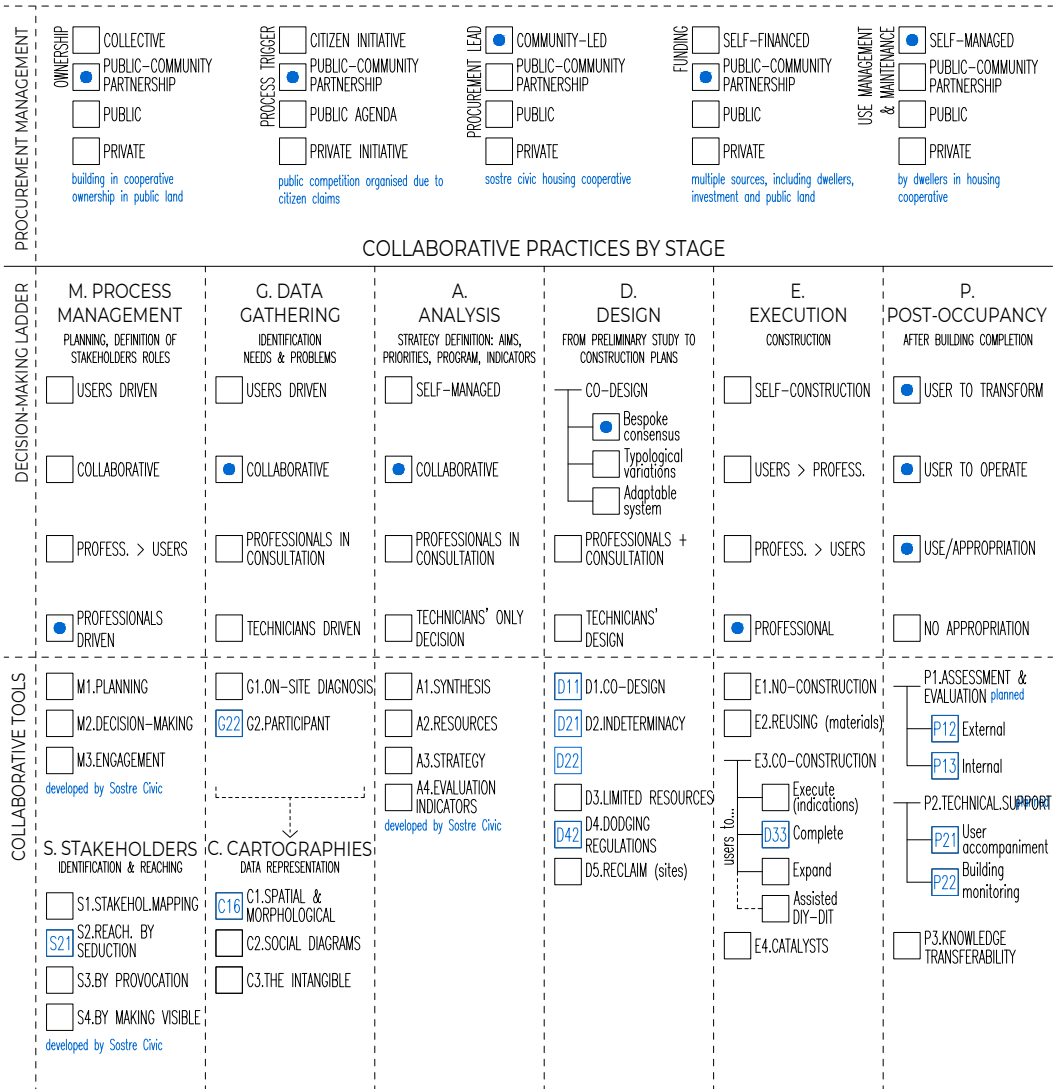
Cirerers building as completed.



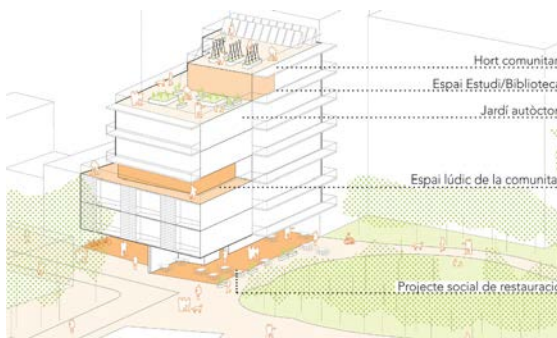
Plan.

W03 CIRERERS COOPERATIVE HOUSING

CIRERERS COOPERATIVE HOUSING



W. WORKS | HOUSING



Community spaces, axonometry as distributed in the building (left) and as built (right).

Annex 3. Toolkit as instrument for the analysis of 29 works in Barcelona

COLLABORATIVE TOOLS

Public plots competition for cooperative housing in 2017

Sostre Civic as a cooperative with a technical team that included Celobert as architects was awarded for the Cirerers street plot in the competition organised by the municipality. Sostre Civic operated as procurement self-managed agency, including process management roles, calendarisation and setting financial strategy.

S21

Stakeholders > Direct invitation

Dwellers are members of the Sostre Civic cooperative, who contacted potentially interested users through their internal organisation media.

G22

Data gathering > Meetings with stakeholders

The diagnosis phase included meetings with different stakeholders, neighbours and future dwellers.

C16

Projective cartography > Neighbourhood

A study of uses of the groundfloor of the neighbourhood determined the needs that Cirerers could respond to.

D11

Design > Co-design workshops

Around 10 workshops were organised during the design phase across all levels of the project, from general materialisation to specific ones, such as installations. Debates were alternated with questionnaires aiming to reach agreements by consensus. For the distribution of the specific dwellings, one to one meetings with dwellers were organised.

**D21
D22**

Design > Enabling: user appropriation + Enabling: user manipulation

The building encourages manipulation of certain elements with a soft balconies facade and shared spaces. In addition, each "street-landing" is self-managed by the neighbours of each floor.

D42

Design > Camouflage

Several design decisions allowed to dodge regulations that limited design possibilities. That is the case of the community kitchen of the 6th floor, to be installed in a post-occupancy phase. Another example is the duplicity of kitchen air extraction system: a conventional one (inoperative) and a kitchen hood with carbon filter. As a third example, a community-shared room in the groundfloor was declared as the normative residues room.

E33

Execution > User to complete

The limitations of Spanish regulations obliged the building to be built through professional construction. However, users were encouraged to complete the construction according to their needs.

**P12
P13**

Post-occupancy > External evaluation: stakeholder review + Internal evaluation: tools & methods

Both external evaluation with stakeholders and internal one about tools and methods are planned.

P21

Post-occupancy > Post-occupancy technical support

Workshops with users and instructions for introducing dwellers to the heating water system and double-flux ventilation system.

P22

Post-occupancy > Building monitoring

Including environmental systems and indicators.

W03 CIRERERS COOPERATIVE HOUSING



The building under construction with CLT wood.



Building as completed, from the street (left) , and street-landings (right).

OUTCOMES

Cirerers cooperative housing building, along with the other available plots of land in the 2017 competition (La Balma, La Chalmeta, Sarrià, and la Xarxaire) represent the second stage of cooperative housing in Barcelona, following the prototypes of the la Borda and Princesa buildings. In other words, they represent the consolidation of the model and a shift from the uniqueness of the prototype to the system. As such, the Sostre Cívic housing cooperative, which also developed Princesa, played a fundamental role in leading the process as an umbrella cooperative, within which Cirerers is one of the so-called “phases”.

As acknowledged by the architects, the severe regulatory restrictions involved in Cirerers resulted in a lower level of typological experimentation than was desired, although the building is generous in terms of shared spaces, which resulted from residents’ commitment to the communal project. This also enabled the use of the CLT system in the building, despite its higher cost, in an attempt to reduce the carbon footprint of construction, and the design of community spaces with an impact on the neighbourhood on the ground floor. In addition, some minor parts of the building will be completed and customised by users during the post-occupancy phase.

Cirerers evidences the difficulties of fitting a housing project based on a communal and sustainable form of living, in a legal framework and approach based on a system of private and individually-owned property, with outdated environmental regulations. This was seen in the element of deception involved in the construction costs and the camouflage of certain communal uses under a more conventional presentation. While la Borda was promoted by the municipality as a prototype, and thus an exception, Cirerers underwent more conventional procurement assistance from the municipality, which translated into a less precise understanding of its particularities as a housing model that was distinct from either a public or a private one (Avilla-Royo, Jacoby and Bilbao, 2021). In addition, there was a change in the density of housing units during the design stages from 27 to 32 due to financial reasons, a change of use on the ground floor and a significant variation in the types of residents living there.

More information:

www.celobert.coop/projete/cirerers.

Avilla-Royo, R., Jacoby, S. and Bilbao, I. (2021) 'The Building as a Home: Housing Cooperatives in Barcelona'. *Buildings*, 11(4), p.137.

Images: Celobert website, photographs by Guifré De Peray and Joan Guillamat.

STAKEHOLDERS

Civic engagement / private

Four residents (two couples)

Community architects

Arqbag architects cooperative

Technical staff

COECO building cooperative

CONTEXT & AIMS

Guimerà Senior Cohousing repurposed an agricultural warehouse as senior co-housing building for two couples. The analysis of individual users' lifestyles, routines and current and future needs were analysed in a co-design process. This allowed the architects to plan and reorganise the spaces according to specific uses in relation to the degrees of collectivisation required at each point in time for each of the residents: as individuals, as a couple, as a community and even for neighbourhood spaces.

To solve the transition in scale from a warehouse to cohousing use, the project proposes the insertion of a central facilities block that mediates between multiple-use spaces and a degree of privacy. The project includes bioclimatic and passive environmental strategies. Rammed earth bricks become the main construction material of the project, operating as a humidity regulator and providing thermal inertia.

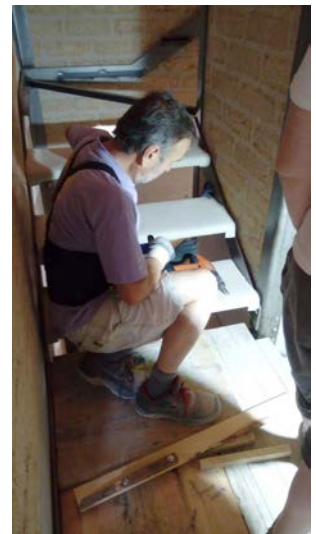
The programme follows a "height-based privacy gradient". On the ground floor, spaces for most communal uses are planned to connect with the street and the garden: the kitchen, living room, dining room, shared bathroom, and a large multipurpose free space. The most private spaces, however – bedrooms and individual bathrooms – are sited on the first floor. In between, the two wooden mezzanines can accommodate complementary needs as they occur.

The execution was partly developed by residents, who built the stone wall as well as all the carpentry elements (except the structural ones) and the furniture. In addition, residents have continued non-essential construction works during occupation, completing the building according to their needs.

– Information courtesy of Arqbag, translated and adapted by the author.



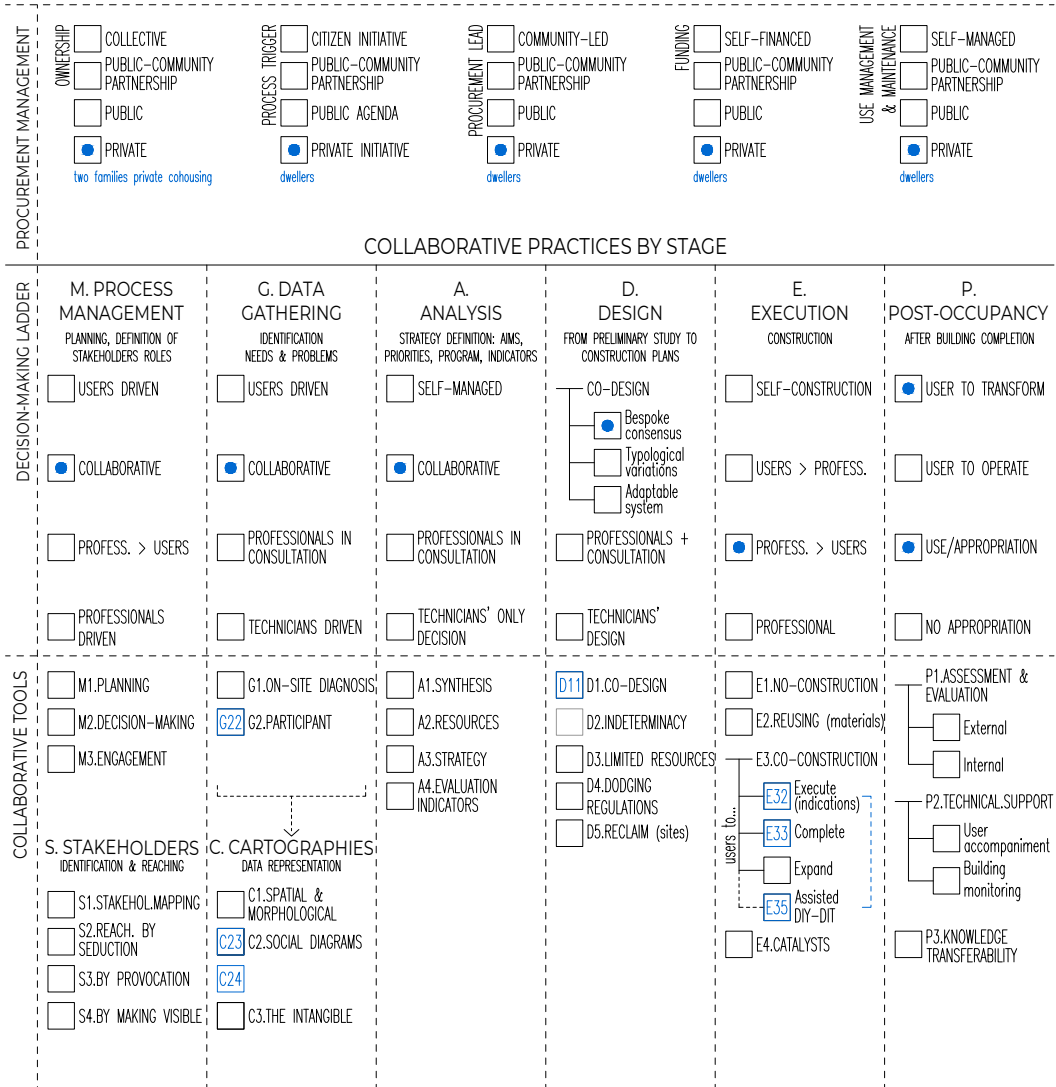
Guimerà village in Catalonia.



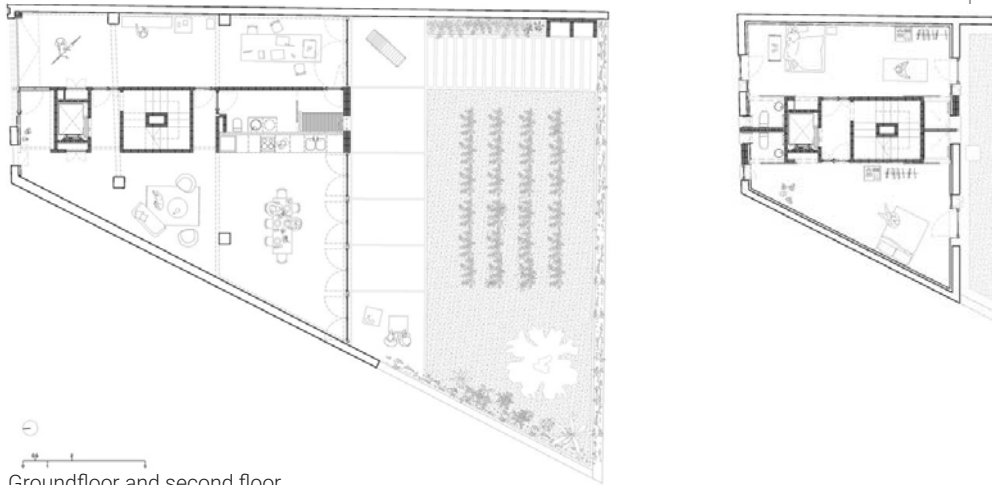
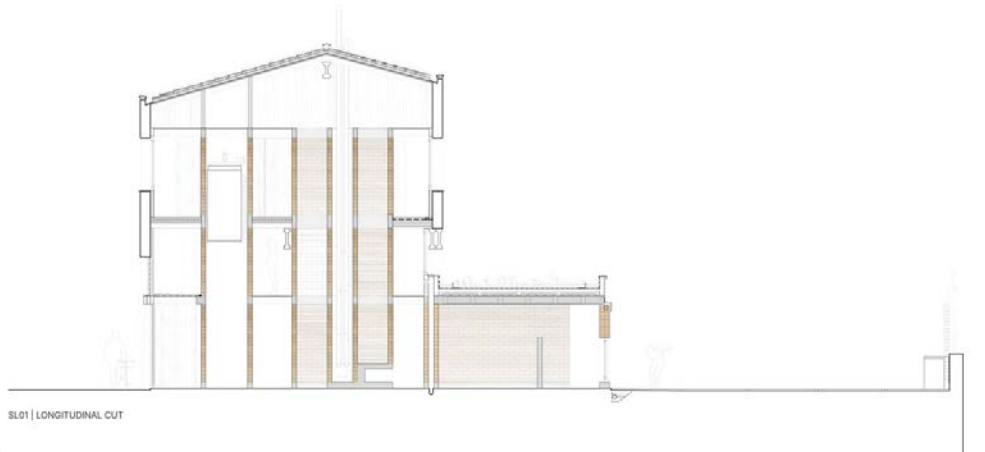
Co-design and co-construction.

W04 GUIMERÀ SENIOR COHOUSING

GUIMERÀ SENIOR COHOUSING



W04 GUIMERÀ SENIOR COHOUSING



OUTCOMES

Guimerà exemplifies the design of a small cohousing unit, tailored for its users both in terms of the use of space – determined by an efficient analysis of their current and future needs and habits – and user engagement, evidenced by their active involvement in all the procurement phases. In this regard, the choice of rammed earth and wood for the construction fulfilled the requirements of both sustainability and execution. The engagement of users in the construction phase, given their skills and knowledge of wood construction, offered the potential for customisation, saving costs, as well as the challenge of coordinating the professional external work with self-built elements. The lack of an overall procurement body, such as a cooperative or a public procurement agency, translated into close collaboration between residents and technical staff, which was acknowledged by the architects to have been successful.

As explained by the architects in their account of the project, “our job as designers was mostly to guide the clients towards the schematisation of their living habits, within a community, and to transform that resulting diagram into a living space that would meet comfort and bioclimatic requirements. We had worked with the clients before, communication with them was fluent, and we can happily say the project reaches both our and their expectations”.



Building as inhabited.

More information:

www.arqbag.coop/guimera

<https://www.cma.cat/tv3/alcarta/planta-baixa/planta-baixa-el-tripartit-psc-erc-i-comuns-la-coalicio-preferida-dels-catalans-segons-el-cis/video/6100505> (minute 1:22:00)

Images: courtesy of Arqbag.

STAKEHOLDERS

Civic engagement	Neighbours of les Planes
Public administration	Sant Cugat del Vallès municipality, Departament de Medi Ambient i Participació, Cultura, Serveis Socials, Pla de Barris, Mútua Terrassa, Generalitat (SOC)
Community architects	ETSAV School of Architecture (UPC) Arqbag architects cooperative
Private	Residents of the refurbished houses (REC project) Fundació Engrunes, Testo, Akzonel, Sikkens, Grup Giró and Aislux, Applus+

CONTEXT & AIMS

The Pas a Pas project consists of a sequence of interventions in an isolated hilly neighbourhood called les Planes, located in Sant Cugat del Vallès Municipality, in the Metropolitan Area of Barcelona. The interventions, developed over three years, included a Community Energy Refurbishment (REC; W06), the improvement of pedestrian accessibility (Ringo Rango Route; W22), a community centre ((e)co Platform; W14), and the improvement of an outdoor sports field (Espai Pere Grau; W15). All of these aimed to improve an area whose community was severely affected by the economic crisis after 2008, and suffered from energy poverty, a lack of public facilities and poor transport networks. Each of the four projects that Pas a Pas consists of entailed different approaches to the management of resources and the stakeholders involved, given the nature of the works developed.

Pas a Pas was made possible through the cooperation between academia, the municipality, and civic society. This involved, on the one hand, Vallès School of Architecture's (ETSAV) TAP-PUD studio, coordinated by Coque Claret, Dani Calatayud and Roger Tudó. TAP-PUD is strongly committed to architectural pedagogies based on a proactive student attitude, learning by doing, and citizen participation and training. On the other, it involved the municipality and public institutions linked to each of the projects. Finally, the local community proved to be highly engaged and included many different types of users: children, families, newcomers, organisations, educators, and in public facilities staff, all of whom can be participants in urban improvement interventions.



From top to bottom, left to right:
 Les planes neighbourhood (two top images).
 REC, Community Energy Refurbishment.
 Ringo Rango Route, improvement of pedestrian accessibility.
 Pere Grau Space, roof for an outdoor sports field (bottom right).
 (e)co Platform (picture by Andres Flajszer).

COLLABORATIVE TOOLS

The analysis of the process of Pas a Pas can be found in each of the projects sheets:

W06 Community Energy Refurbishment

W14 (e)co Platform

W15 Pere Grau Space

W22 Ringo Rango Route

OUTCOME

PAS a PAS created a Research-Action platform that linked the university with a specific neighbourhood and enabled technical support and assistance to be provided for three years, therefore contributing to an improvement in the neighbourhood. Four different projects were developed and executed, which included public space, public facilities, and housing energy refurbishment. Each of them entailed its own challenges and specific issues, which are analysed separately (REC W06; (e)co platform W14; Pere Grau W15; Ringo Rango Route W22). One of them, the (e)co Platform, next to the Pere Grau Space, operated as an on-site technical office and is currently a self-managed facility linked to a public civic centre. Each project was made possible by the success of the previous intervention and the strong relationship forged there. Projects were based on community trust and partnership with a wide range of stakeholders. The process also increased community cohesion and mutual support networks and in terms of the municipality it allowed them to achieve their goals through different means.

Pas a Pas evidences how self-organisation and intersecting partnership can achieve effective urban transformation projects that public administration cannot address – from housing energy refurbishment to public space and facilities. This project, based on connecting needs with opportunities and private, public and academic stakeholders, resulted in many positive outcomes beyond the execution of the projects, such as the strengthening of community networks, the training of residents in professional skills, and the education of architecture students.

More information:

Pas a Pas: projectepasapas.wixsite.com/pasapaslesplanes/inicio; @PasaPas Les Planes youtube.

Ruta Rinto Rango: rutaringorango.weebly.com

(e)co prototype: www.eco.upc.edu; www.arqbag.coop/prototip-eco; www.espaiecosantcugat.cat

Pere Grau Space: www.arqbag.coop/ambit-pere-grau; www.arqbag.coop/coberta-pistes
Images: courtesy of Arqbag.

See also the following MSc theses from ETSAV (Universitat Politècnica de Catalunya), available at: www.upccommons.upc.edu:

Colomé, B. (2014) *Millorem els habitatges de Les Planes: habitatge C/Carena, núm. 3*.

Burgaya, A. (2016) *Ringo Rango*.

Mihalache, A. (2016) *Rehabilitació energètica a Les Planes*.

Mitjans, J. (2014) *Millorem els habitatges de Les Planes (Sant Cugat del Vallès)*.

Pich-Aguilera, M. (2015) *Les Planes Resilient*.

Vilajoana, A. (2016) *Infraestructures col·lectives*.

COMMUNITY ENERGY REFURBISHMENT (REC)

Les Planes Neighbourhood, Sant Cugat del Vallès | 2014-2017

STRATEGICAL

PAS A PAS

REC: Community Energy Refurbishment is part of Pas a Pas project in Les Planes Neighbourhood. See Stakeholders and Context & Aims description in Pas a Pas sheet (W05).

REC

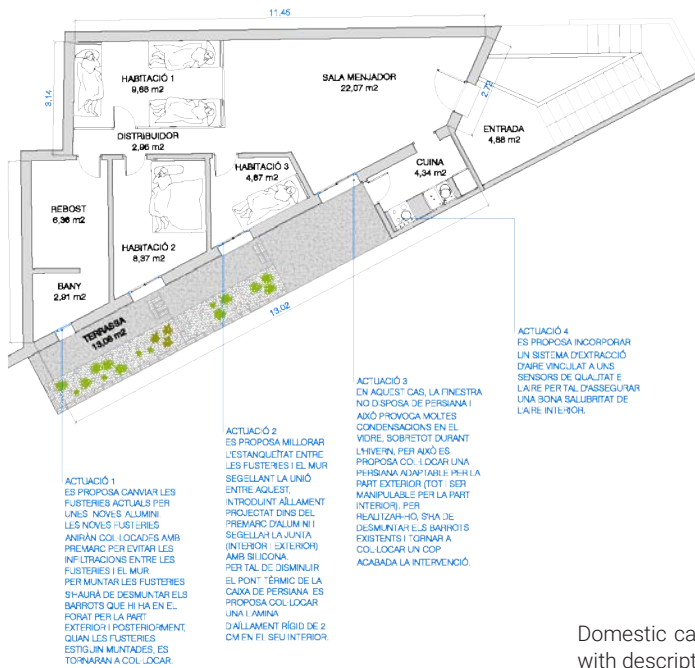
The REC project (Community Energy Refurbishment) project addressed the problem of energy poverty in the neighbourhood of les Planes, within the Pas a Pas project (W05). The feasibility of REC became possible as a result of the synergy between different stakeholders and disciplines, where a number of public institutions, private companies and the university cooperated to improve six housing units. The first phase included the training of locals in construction skills through the Servei d'Ocupació de Catalunya, (SOC, Public Employment Service of Catalunya), with the aim of alleviating unemployment levels in the locality. These first works took place in the area of Pere Grau (W15). In the second stage, an analysis of the neighbourhood included architectural, social and sanitary reports developed by municipal workers and architects. Six homes were selected as the initial interventions to address the most urgent situations. The interventions were developed through micro-actions and focused on energy renewal and the improvement of living conditions: thermal insulation, increasing the use of passive solar systems, air quality control systems and window-frame waterproofing. The work was mostly undertaken by professional construction companies through Unemployment Plans, although some residents also participated. In addition, the project was financed by the municipality from savings gained from energy conservation in public buildings, and architects and ETSAV TAP-PUD studio students offered their time on a voluntary basis. In addition an anthropologist was appointed by the municipality as part of the Neighbourhood Plan (Pla de Barris).

OUTCOMES

The REC (Community Energy Refurbishment) project achieved its goals successfully: an improvement in the environmental conditions of housing units suffering from substandard conditions and, in doing so, training local people in construction skills to address the problem of unemployment. The environmental impact of the intervention was measured in three different ways. First, energy monitoring of the building before and after the intervention. Second, through a questionnaire completed by residents, evidencing an improvement in their perception of their wellbeing, in emotional, material and physical terms. Finally, the improvement in residents' health was documented, evidencing the potential of housing refurbishment as a preventative healthcare measure. The REC project makes its replicability at a larger scale possible. This situation raises several questions, including the public management of the operation, the non-dependence on voluntary work and a political discussion of the prioritisation of housing improvement as a preventative healthcare measure. In addition, it opens up the possibility of training both professionals and students.



Original condition, construction works and skylights as finished.



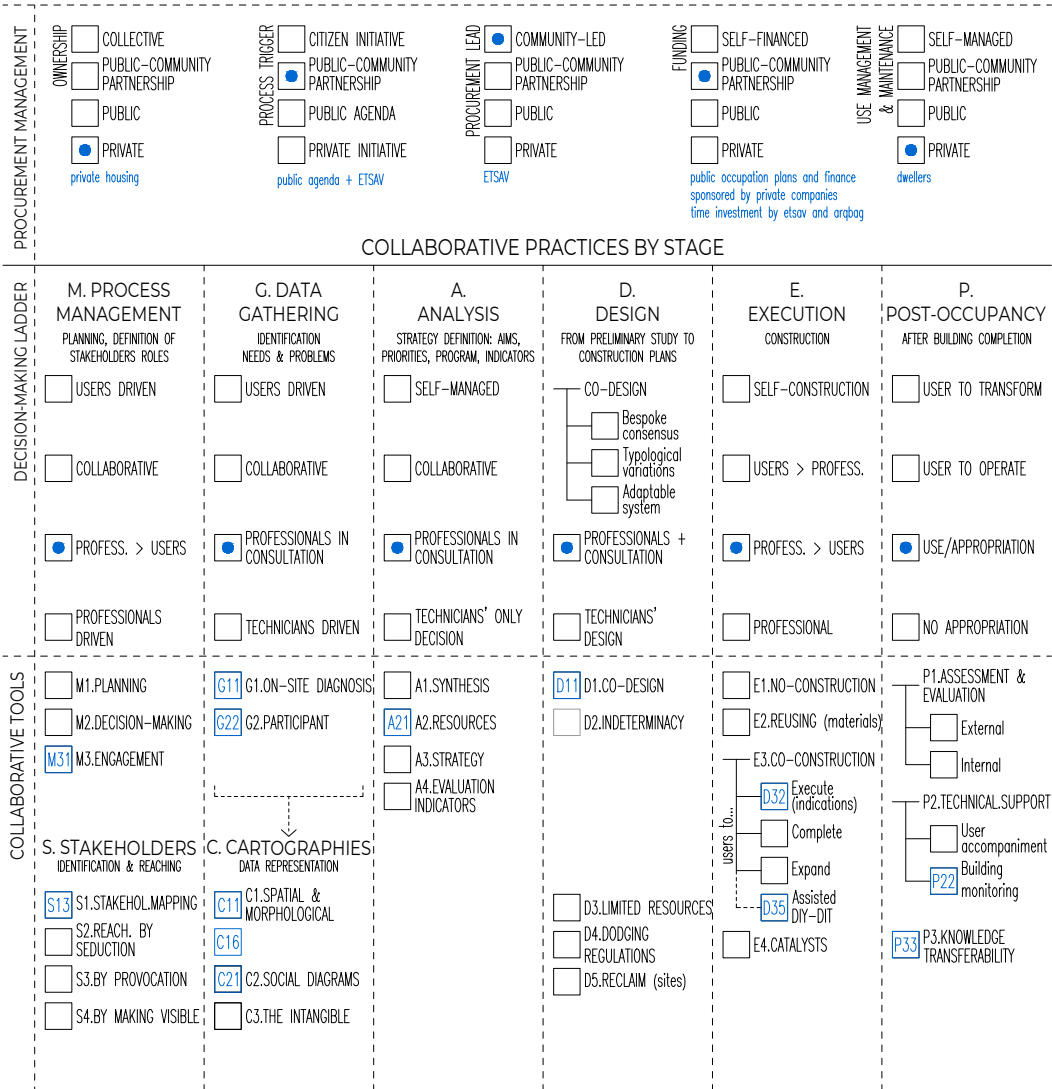
Domestic cartography of one of the houses with descriptions of problems encountered.

W06

PAS A PAS LES PLANES

COMMUNITY ENERGY REFURBISHMENT (REC)

REC COMMUNITY ENERGETIC REFURBISHMENT



COLLABORATIVE TOOLS

- S13** **Stakeholders > Sociogram**
Identification of the different stakeholders involved and their relationships, be these public institutions, university, private sponsors, or users.
- M31** **Process management > Co-organise / develop with**
The project was only possible through the partnership of multiple stakeholders: ETSAV, Arqbag, municipality, and Pla de Barris (Neighbourhood Plan).
- G22** **Data gathering > Meetings with stakeholders**
A social analysis was developed in parallel to an architecture one, for which direct observation, meetings, group walks, and interviews took place.
- G11
C11** **Data gathering > Ethnographic observation + Projective cartography > drawing the domestic**
Domestic spaces were analysed through site ethnographic and technical observation. Data was represented in a domestic cartography.
- C16** **Projective cartography > Neighbourhood**
Social and morphological cartography were developed to discuss the framing analysis.
- C21** **Projective cartography > User portraits**
Specific knowledge of each users was gathered to know their specific needs.
- A21** **Analysis & Strategy > Financial analysis & co-finance strategies**
To guarantee the feasibility of the execution. Resources included sponsoring from private companies.
- D11** **Design > Co-design workshops**
Design was developed by architects, and approved by dwellers.
- Professional construction**
Works are mostly developed by professional construction workers through public employment training agency (SOC).
- E32
E35** **Execution > User to execute + Collective assisted DIY-DIT**
Although the project was mostly executed through professional construction, some of the dwellers also participated actively.
- P22** **Post-occupancy > Building monitoring**
Energetic performance was monitored before and after the intervention. In addition, medical results of a dweller with vitamin D before and after were compared and evidenced a positive impact.
- P33** **Post-occupancy > Process reports**
A results report was written at the end of the process. In addition, diploma projects of some Arqbag members are available in the UPC repository; see bibliography in Pas a Pas sheet (W05).

STAKEHOLDERS

Civic engagement/private	Residents of Guernika building
Public administration	CCCB Culture Center (Citizen's Technical Consultation Office)
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

CONTEXT & AIMS

Lancaster, nicknamed "Guernika", is a project for the refurbishment of a squatted building in Barcelona city centre. The project emerged from the 2015 AC & Pei.Lab PUJ, who set up a Citizens' Technical Consultation Office within the framework of the Piso Piloto exhibition at CCCB (Centre de Cultura Contemporània de Barcelona), Barcelona.

In 2011, a group of people set up a squat in Guernika, aiming to support a project for migrant single mothers, but the poor condition of the building and the failure of the project resulted in sub-standard housing conditions. By 2015 Guernika was being squatted by a wide range of people, from single mothers to elderly people and families, whose common denominator was their urgent need for housing. The residents' idea was to rekindle a new project by gathering the community together again.

After the diagnostic analysis of the building and its residents, the architects concluded that there was an urgent need to improve the sanitary conditions of the building through refurbishment work. Mitigating the zero budget available for the project, the social cartography revealed that the community included residents with construction skills who were willing to improve the condition of the building themselves. Instead of a typical major one-off intervention of building refurbishment, the strategy was based on "microprojects": multiple small-scale actions that residents could execute over time according to their budget and available time.

The technical consultation included a report that mapped the existing conditions and building pathology, and a detailed plan of the interventions required, including the tools and human resources that were required and instructions to carry out the interventions. The microprojects included improving access to light and ventilation in the building, waterproofing the roof, and the installation of a solar-powered heating system.

In addition, the first intervention carried out by the architects and the community in the summer of 2015 consisted of transforming the ground floor space into a shared meeting area, with a window opening onto the street, and painting the façade and common areas.



Left: Sarah in front of Guernika. Top right: interior of the building. Bottom right: rooftop visit with residents.



Guernika's new window in the groundfloor, which provided a collective meeting space.

W07 LANCASTER, "GUERNIKA"

LANCASTER, "GUERNIKA"

PROCUREMENT MANAGEMENT	OWNERSHIP	PROCESS TRIGGER	PROCUREMENT LEAD	FUNDING	USE MANAGEMENT & MAINTENANCE
<input type="checkbox"/> COLLECTIVE	<input checked="" type="checkbox"/> CITIZEN INITIATIVE	<input checked="" type="checkbox"/> COMMUNITY-LED	<input checked="" type="checkbox"/> SELF-FINANCED	<input checked="" type="checkbox"/> SELF-MANAGED	<input checked="" type="checkbox"/> SELF-MANAGED
<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP
<input type="checkbox"/> PUBLIC	<input type="checkbox"/> PUBLIC AGENDA	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> PUBLIC	<input type="checkbox"/> PUBLIC
<input checked="" type="checkbox"/> PRIVATE	<input type="checkbox"/> PRIVATE INITIATIVE	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> PRIVATE	<input type="checkbox"/> PRIVATE
<i>squatted private housing building</i>	<i>Lancaster dwellers AC Citizen Attention Office</i>	<i>Lancaster dwellers AC Citizen Attention Office</i>	<i>dwellers + donations</i>	<i>dwellers</i>	

COLLABORATIVE PRACTICES BY STAGE

DECISION-MAKING LADDER	M. PROCESS MANAGEMENT PLANNING, DEFINITION OF STAKEHOLDERS ROLES	G. DATA GATHERING IDENTIFICATION NEEDS & PROBLEMS	A. ANALYSIS STRATEGY DEFINITION: AMS, PRIORITIES, PROGRAM, INDICATORS	D. DESIGN FROM PRELIMINARY STUDY TO CONSTRUCTION PLANS	E. EXECUTION CONSTRUCTION	P. POST-OCCUPANCY AFTER BUILDING COMPLETION
<input type="checkbox"/> USERS DRIVEN	<input type="checkbox"/> USERS DRIVEN	<input type="checkbox"/> SELF-MANAGED	<input type="checkbox"/> CO-DESIGN	<input checked="" type="checkbox"/> SELF-CONSTRUCTION	<input type="checkbox"/> USER TO TRANSFORM	
<input type="checkbox"/> COLLABORATIVE	<input checked="" type="checkbox"/> COLLABORATIVE	<input type="checkbox"/> COLLABORATIVE	<input type="checkbox"/> Bespoke consensus	<input type="checkbox"/> USERS > PROFESS.	<input type="checkbox"/> USER TO OPERATE	
<input checked="" type="checkbox"/> PROFESS. > USERS	<input type="checkbox"/> PROFESSIONALS IN CONSULTATION	<input checked="" type="checkbox"/> PROFESSIONALS IN CONSULTATION	<input type="checkbox"/> Typological variations	<input type="checkbox"/> PROFESS. > USERS	<input checked="" type="checkbox"/> USE/APPROPRIATION	
<input type="checkbox"/> PROFESSIONALS DRIVEN	<input type="checkbox"/> TECHNICIANS DRIVEN	<input type="checkbox"/> TECHNICIANS' ONLY DECISION	<input type="checkbox"/> Adaptable system	<input type="checkbox"/> PROFESSIONAL	<input type="checkbox"/> NO APPROPRIATION	
<input type="checkbox"/> M1.PLANNING	<input checked="" type="checkbox"/> G11 G1.ON-SITE DIAGNOSIS	<input type="checkbox"/> A1.SYNTHESIS	<input type="checkbox"/> D1.CO-DESIGN	<input type="checkbox"/> E1.NO-CONSTRUCTION	<input type="checkbox"/> P1.ASSESSMENT & EVALUATION	
<input type="checkbox"/> M2.DECISION-MAKING	<input checked="" type="checkbox"/> G13	<input type="checkbox"/> A2.RESOURCES	<input type="checkbox"/> D2.INDETERMINACY	<input type="checkbox"/> E2.REUSING (materials)	<input type="checkbox"/> External	
<input type="checkbox"/> M3.ENGAGEMENT	<input checked="" type="checkbox"/> G22 G2.PARTICIPANT	<input type="checkbox"/> A3.STRATEGY	<input checked="" type="checkbox"/> D34 D3.LIMITED RESOURCES	<input type="checkbox"/> E3.CO-CONSTRUCTION	<input type="checkbox"/> Internal	
<input type="checkbox"/> S1.STAKEHOL.MAPPING		<input type="checkbox"/> A4.EVALUATION INDICATORS	<input type="checkbox"/> D4.DODGING REGULATIONS	<input checked="" type="checkbox"/> E31 Execute (indications)	<input type="checkbox"/> P2.TECHNICAL.SUPPORT	
<input checked="" type="checkbox"/> S21 S2.REACH. BY SEDUCTION	<input checked="" type="checkbox"/> C13 C1.SPATIAL & MORPHOLOGICAL		<input type="checkbox"/> D5.RECLAIM (sites)	<input type="checkbox"/> Complete	<input type="checkbox"/> User accompaniment	
<input type="checkbox"/> S3.BY PROVOCATION	<input checked="" type="checkbox"/> C21 C2.SOCIAL DIAGRAMS			<input type="checkbox"/> Expand	<input type="checkbox"/> Building monitoring	
<input type="checkbox"/> S4.BY MAKING VISIBLE	<input type="checkbox"/> C3.THE INTANGIBLE			<input checked="" type="checkbox"/> E35 Assisted DIY-DIT	<input checked="" type="checkbox"/> P33 P3.KNOWLEDGE TRANSFERABILITY	
				<input checked="" type="checkbox"/> E41 E4.CATALYSTS		



Current aerial view (2021) of the void left by the guernika building.

COLLABORATIVE TOOLS

G13

Data gathering > On-site technical support office

Arquitectos de Cabecera and Pei.Lab Javeriana de Bogotá offered a free architecture Citizen's Technical Consultation Office during the Piso Piloto exhibition in CCCB culture centre in 2015.

S21

Stakeholders > Direct invitation

Architects invited Lancaster's residents to participate in the project, who allowed a cartographic analysis of their houses. Most of the residents decided to join the project.

**G11
G22**

Data gathering > Ethnographic observation + Meetings with stakeholders

Ethnographic research methods were employed in order to develop the cartography of the building and evaluate dwellers' living conditions, along with conversations with dwellers.

C13

Projective cartography > Building as socio-spatial ecosystem

The socio-spatial cartography was crucial for setting this strategy, where not only building pathologies were identified but also residents' construction skills and availability.

C21

Projective cartography > User portraits

A deep understanding of users' profiles and construction skills was crucial to develop a strategy based in mid-term non-assisted co-construction.

**D34
E32**

Design > Split large interventions + Execution > User to execute

Being a squatted building with no budget for intervention, technical staff proposed a number of microprojects detailing steps to be executed by dwellers. Instructions for each execution phase included details of material, time and investment, as well as comprehensible technical drawings.

**E35
E41**

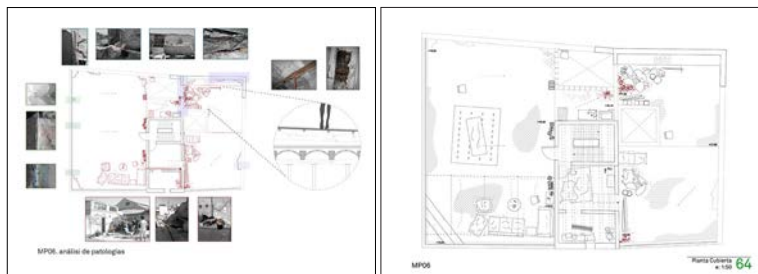
Execution > Collective assisted DIY-DIT + Generative actions

During the workshop, a groundfloor space was transformed into a collective space. As crucial intervention, a window was opened in the groundfloor, improving the hygienic conditions.

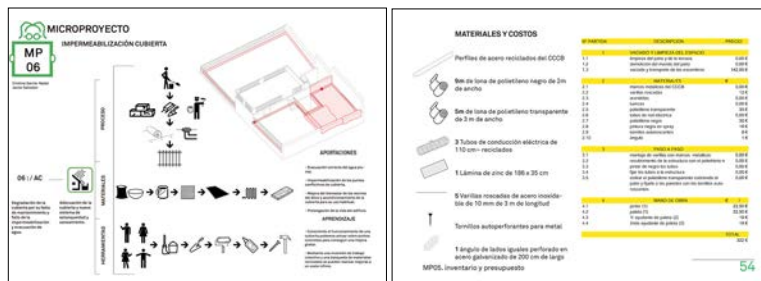
**E31
P33**

Execution > Technical specifications + Post-occupancy: Process reports

Technical specifications were drawn so users could develop improvement works during post-occupancy according to their priorities and possibilities. A process report is available at www.arquitectosdecabecera.org.

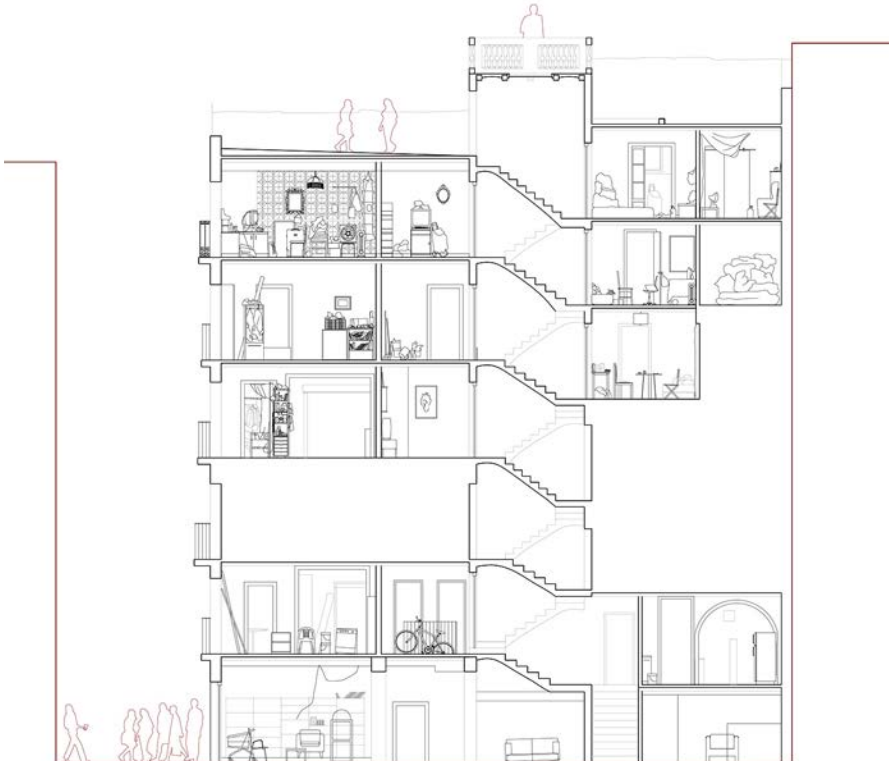
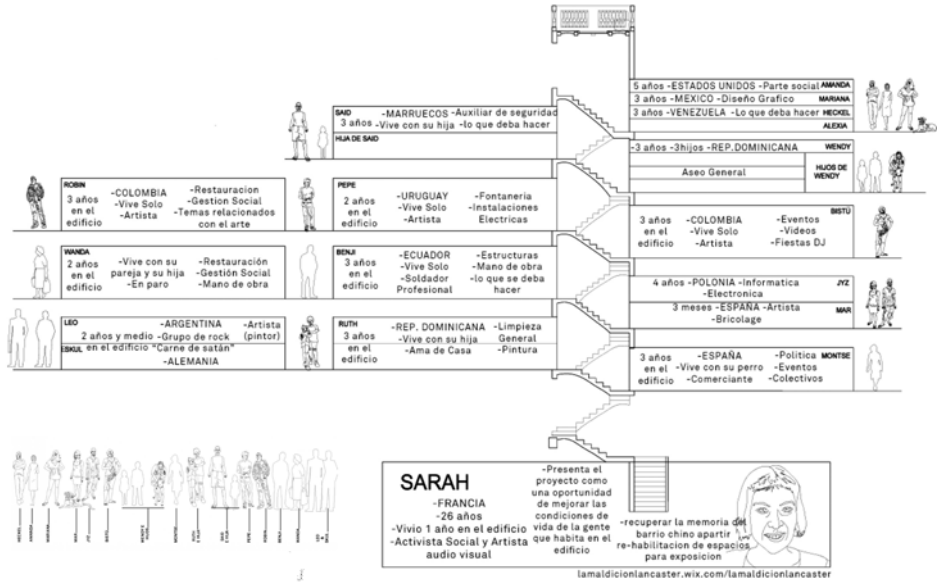


Pages from the technical report, analysing building construction deficiencies.



Pages from the technical report and microprojects.

W07 LANCASTER, "GUERNIKA"



Building as an ecosystem: social (top) and spatial (below) cartography of Guernika. Knowing who inhabits the building was a crucial step to develop the strategy.

OUTCOMES

The number of visits to the office evidenced the need for a Citizens' Technical Consultation Office to address the everyday architectural problems that are overlooked by both the local municipal administration and professional architectural practices. Rather than being an exception within an architecture festival which is based on voluntary work, the existence of convenient, subsidised neighbourhood technical consultation offices would allow architectural advice to be offered as an effective public service.

The Guernika project became a successful short-term project but was a failure in the longer term. On one hand, the presence of students and the ground floor intervention increased trust in the project and acted as a catalyst for community cohesion. Within a few days, a community space was created on the ground floor of the building while architecture students' direct contact with urban problems had an impact on their education and their perception of their role as architects.

On the other, regarding the long-term impact, the refurbishment works planned in the technical report were never executed. Guernika was affected by a Pla de Millora Urbana (PMU, Urban Improvement Plan) from 2002 onwards, which proposed the demolition of the building. Despite all efforts and a slight improvement in living conditions, the threat of eviction discouraged residents from carrying out major improvements. In 2016 the Mothers L24 Collective was created to avoid eviction. In the years that followed, residents were relocated to public housing accommodation and Guernika was demolished.



Guernika ground floor community space with the new window.

More information:

www.arquitectosdecabecera.org/AC/en/portfolio/lancaster

Images: courtesy of Arquitectos de Cabecera.

STAKEHOLDERS

Civic engagement	Platform "Can Batlló és pel Barri", within which: "Strategy work group", in big scale and planning "Space Design work group" in warehouses
Public administration	Municipality of Barcelona
Community architects	Students of architecture (later Lacol)

CONTEXT & AIMS

The Can Batlló premises, built in 1878 by textile industrialist Joan Batllo i Barrera, eventually became one of the biggest textile factories in Barcelona. Barcelona's 1976 Pla General Metropolità (PGM, General Metropolitan Plan), zoned the Can Batlló area for public facilities and green areas, but no significant transformation took place as a result, and the area gradually deteriorated and fell into disuse. The lack of public facilities and the undesired condition of a large walled area had been the cause of grassroots protests since the 1980s.

In 2009, protests over the state of Can Batlló intensified. Social protest movements started a media campaign and presented a two-year ultimatum to the municipality, "Tic-Tac Can Batlló", which coincidentally took place two months after the 15-M Movement in 2011 that had politicised wider sectors of the population and legitimised grassroots movements. A week before the deadline, and on Xavier Trias's first day as mayor of Barcelona, on 11 June 2011, the municipality agreed to the demands of grassroots organisations. Residents started by demolishing the perimeter walls, an operation that was completed by the municipality. In 2011, the municipality and the neighbourhood platform "Can Batlló és pel Barri" (Can Batlló is for the neighbourhood) reached an agreement by which part of the public space of Can Batlló would be managed by the platform to host self-managed facilities, the first of which was Warehouse 11. Successive administrations acknowledged the legitimacy of grassroots movements as a socio-political voice, particularly after the arrival of the municipalist political party Barcelona en Comú in 2015. The interventions into Can Batlló heritage followed a pattern of claim → construction → claim → construction, the first examples being Warehouse 11 (W09), other workshops, and Coopolis (W10), followed by the cooperative housing projects La Borda (W02) and Sotrac. Other projects are awaiting a permanent space, such as Arcàdia School (W11). In 2018, the platform became involved in the redefinition of the masterplan of the area.

Today Can Batlló is managed through a monthly general assembly, weekly coordination meetings, several work commissions that meet regularly, and work cooperatives organised in four groups: these address respectively the internal structure; arts and crafts (arts, wood workshop, collective printing, mobility, audio-visual laboratory, craft school, beer workshop, sewing workshop); education and documentation (the Josep Pons Library, archival collections, and Arcàdia school), and cultural and leisure activities.



Can Batlló historical image. Source: Lacol, 2013. Demonstration in 2002. Source: Lacol, 2013.



Can Batlló within Sants neighbourhood.



Demolition of the wall by neighbours with a painting of "Tic Tac can Batlló".



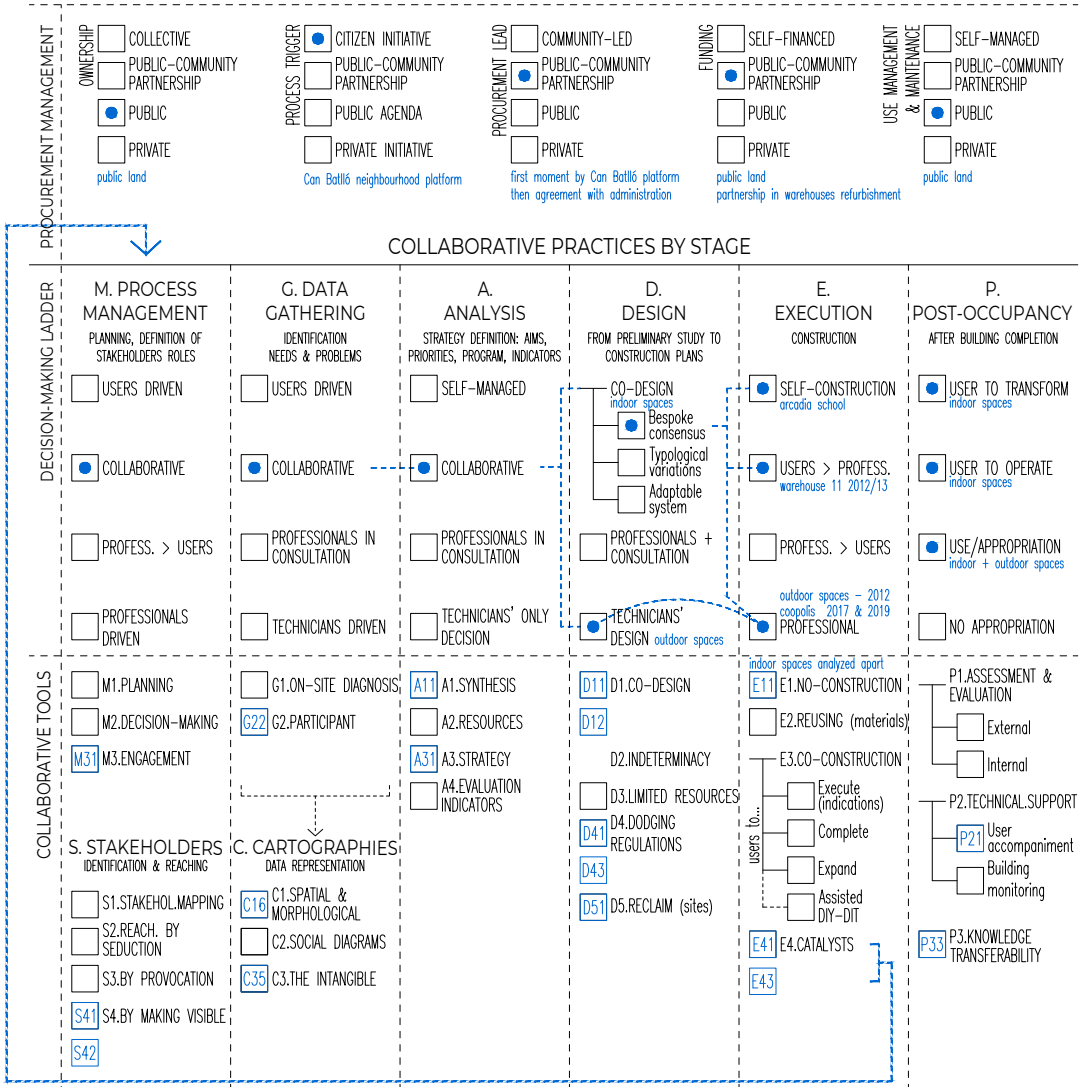
Social movements entering of the premises on 11th June 2011.



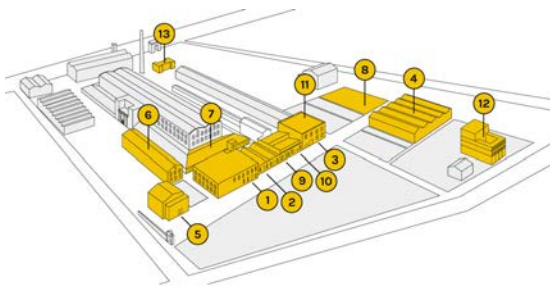
Neighbours assembly and recovery of warehouses, after 2011. Source: Lacol, 2013.

W08 CAN BATLLÓ COMPLEX

CAN BATLLÓ PREMISES



W. WORKS | FACILITY



- 1 BLOC 11**
 - Activitats
 - Bar
 - Biblioteca Josep Pons
 - Economia
 - Espai de Creació Musical
 - Espai de Costura
 - Estratègia i Negociació
 - La Fondona
 - Rocòdrom
 - Secretaria
- 2 NAU 09**
 - Cuina
- 3 NAU ARTS GRÀFIQUES**
 - Arts
 - Impremta col·lectiva
 - Editorial Descontrol
- 4 BLOC 9**
 - Cinc
 - Mobilitat
- 5 MÀSIA PALLERIA**
 - Arcada
 - Espai Esportiu
 - La Ganxera
 - Xarxa d'aliments
 - Los ayudantes
- 6 BLOC 2**
 - Fundació Salvador Seguí
 - La Nau espai familiar
- 7 NAU CENTRAL**
 - Coopolla
 - Eines
 - Garatge
- 8 HORTS**
 - Horts
- 9 INFRASTRUCTURES**
 - Infraestructures
- 10 FUSTERIA**
 - Fusteria
- 11 NAU 07-09**
 - Celloc
 - Taller de birres de Can Batlló
- 12 LA BORDA**
 - La Borda
- 13 LA CANTINA**
 - La Cantina Lab

Can Batlló complex and self-managed initiatives. Source: www.canbatllo.org.

Annex 5 | Toolkit as instrument for the analysis of 29 works in Barcelona

COLLABORATIVE TOOLS

Walled public land

Neighbours historical claims pressured the administration for both the need for facilities and green spaces, and the demolition of perimeter walls in a public-land large urban settlement.

E41
E43

Execution > Generative action + Do it anyway

After entering the premises and in front of the administrative inaction, the neighbours platform started the demolition of the perimeter wall of Can Batlló, after which the municipality demolished the rest.

M31

Process management > Co-organise / develop with

The platform and municipality reached an agreement for the cession and transformation of warehouses for self-managed facilities; Warehouse 11, Coopolis and Arcàdia are analysed separately.

G22

Data gathering > Meetings with stakeholders

The "Strategy work group" of the assembly met the administration district department, urban planning, and neighbours. Invitations for the general assembly were printed in billboards and posters.

S41
S42

Stakeholders > Collaboration with external events + Printed media

A Heritatge Conference was organised in order to claim the preservation of the warehouses and gain social support. Lacol co-developed the documentary "Com un Gegant Invisible".

C16
C35

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

A11
A31

Analysis & Strategy > The (yellow) manifesto + Strategic action plan

The assembly of Can Batlló, through work groups, defined guidelines and set a strategy of use of warehouses to fit social initiatives.

E11

Execution > Do not do (I): maintain

In front of material scarcity, the intervention in warehouses such as the print house workshops were minimized. The interventions in Warehouse 11 and Coopolis are analysed separately.

D41
D43

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

The "meanwhile condition" as defined by planning (developed but not applied) allows to develop the area without a strict application of regulations nor building permits.

D51

Design > Reclaiming empty plots

After the first intervention in Warehouse 11, the Platform started claiming for more spaces in empty warehouses to accommodate workshops and other activities.

Exterior works executed

Designed by Batllo & Roig architects and executed professionally, the exterior areas of Can Batlló were conditioned as public space with minimum interventions.

D11
D12

Design >Co-design workshops + Proposing an alternative

In front of an unsatisfactory masterplan proposed by the previous private owner, the assembly led the redefinition of Can Batlló masterplan, which included workshops open to the neighbourhood.

P21

Post-occupancy > Post-occupancy technical support

Architects are linked to Can Batlló general assembly, and are part of different social initiatives that take place in Can Batlló, such as Coopolis or la Borda.

P33

Post-occupancy > Process reports

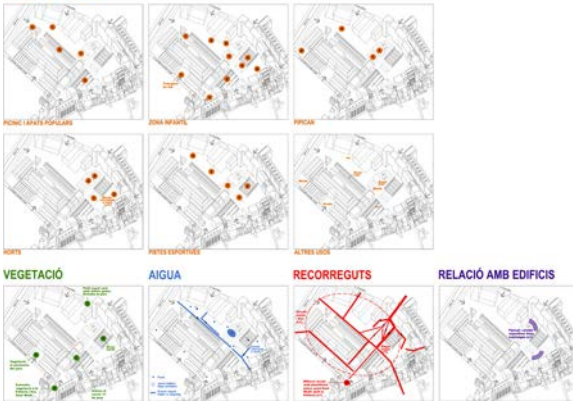
The "participative process of Can Batlló Park" led by the Platform, with workshop attendance between 75-200 people, was reported. Available at the municipality website: ajuntament.barcelona.cat. The masterplan is still in the development phase.

W08 CAN BATLLÓ COMPLEX



Left: poster of the Heritage Conference on 30th April 2011. Right: neighbours assembly in Warehouse 11 around a plan of Can Batlló complex in 2012. Source: courtesy of Lacol.

USOS. Retorn taller 1



PROPOSTA DE DISTRIBUCIÓ D'USOS PARC DE CAN BATLLÓ



Images from Can Batlló masterplan definition: analysis workshop, general plan of uses and neighbourhood assembly in the auditorium of Warehouse 11, 2018. Source: Can Batlló and Lacol, 2019.

OUTCOMES

Celebrated by social movements as a historic victory, Can Batlló represented the shift from “planned degradation” as part of a profit-driven strategy resulting from a liberal agenda with the support of the municipality to a “community construction” (Dalmau, 2014). Can Batlló exemplifies the need for social movements to have a physical space to gather – to organise – but also for areas of non-institutionalised control, managed autonomously by the public administration.

Can Batlló became a catalyst for community cohesion among a very heterogeneous social group (consisting of more than 500 people belonging to many different associations and groups from the Sants neighbourhood) that was challenging a private developer and defending a self-managed collective facility. Over the years Platform Can Batlló acquired the lease for more warehouses and developed numerous activities and workshops in a self-managed organisation that was intentionally independent of the administration. In 2015 the Associació Espai Comunitari i Veïnal Autogestionat de Can Batlló (Self-Managed Communal and Neighbourhood Space of Can Batlló Association) was constituted, and in 2019 the Municipality of Barcelona leased the space for fifty years to the collective through the “Citizen Heritage” formula, developed for community management (Citizen Assets programme, 2017). These professional activities, in complementing voluntary commitment, are a tool to keep Can Batlló active and were validated through economic, social and communal viability requirements.

Can Batlló became a stepping stone in the administration's acknowledgement of the legitimacy of grassroots activism. It also exemplified political involvement by architects, who not only offer design services but are active as part of social movements: Lacol formed part of the Can Batlló working groups for Space Design and Strategy, still active today, which address the evolution of the community project in relation to planning.

More information:

Panóptica and Lacol (2011) 'Com un Gegant Invisible' (documentary). Barcelona. Available at: <https://vimeo.com/82442928>, with english subtitles.

Baiges, C. (2015) 'Can Batlló: cuando la ciudadanía reutiliza el patrimonio industrial'. *Butlletí d'Arqueologia Industrial i de Museus de Tècnica i Ciència*, pp 2-6.

Can Batlló and Lacol (2019) *Memoria del Procés Participatiu Parc de Can Batlló*. Report of the co-design process for Can Batlló park, including detailed description of the different workshops. Available at: ajuntament.barcelona.cat.

Castro, M., Gual, J. M., Martí-Costa, M. and Martínez, R. (2011) 'Can Batlló: Construir comunidades en las ruinas de la crisis' in *Jornadas contra la Depredación de los Bienes Comunes*.

Dalmau, M. (2014) 'Can Batlló: de la degradación planificada a la construcción comunitaria'. *Quaderns-e*, Vol. 19 (1) Available at: dialnet.unirioja.es.

Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

www.canbatllo.org

Images: courtesy of Lacol and canbatllo.org, unless otherwise stated.

STAKEHOLDERS

Civic engagement	Platform "Can Batlló és pel Barri", and its "space design" and "infrastructure" work groups
Public administration	Barcelona Activa (municipal company for professional training) Municipality of Barcelona, cession of the space
Community architects	Students of architecture (later Lacol)

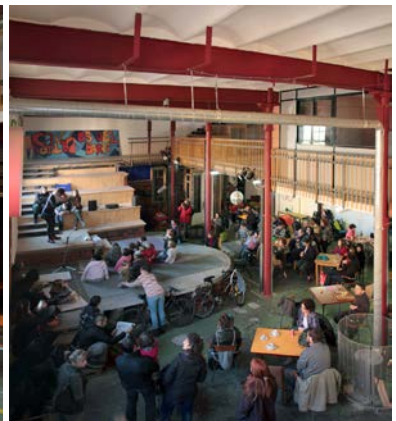
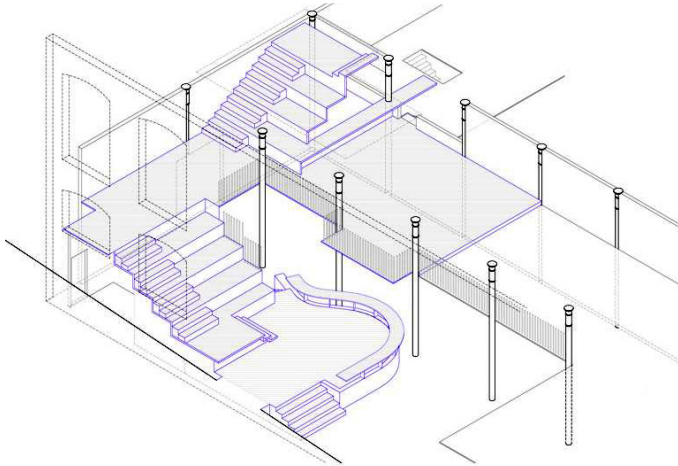
CONTEXT & AIMS

Warehouse 11 (W11) and Coopolis warehouse (W10) are two of the spaces self-managed by neighbours as part of the recovery of the Can Batlló complex (W08) as a self-managed cooperative cluster facility. Both interventions took place consecutively and address similar challenges – i.e., how to refurbish a publicly owned and self-managed facility with few available resources.

Warehouse 11 was the first intervention in the Can Batlló complex after its opening in 2011. The agreement with the municipality to lease the warehouses included the stipulation that the infrastructural work and essential maintenance were the responsibility of the municipality and Barcelona Activa, the public institution for professional training, whereas the neighbourhood platform of Can Batlló had to provide the means to make the spaces suitable for use.

The ground floor hosts the popular self-managed Josep Pons Library, an auditorium and a meeting space, while on the first floor there is a climbing wall and meeting and exhibition spaces. The refurbishment work was carried out on a voluntary, self-build basis, with recycled materials and donations from local residents, including the library's book collection.

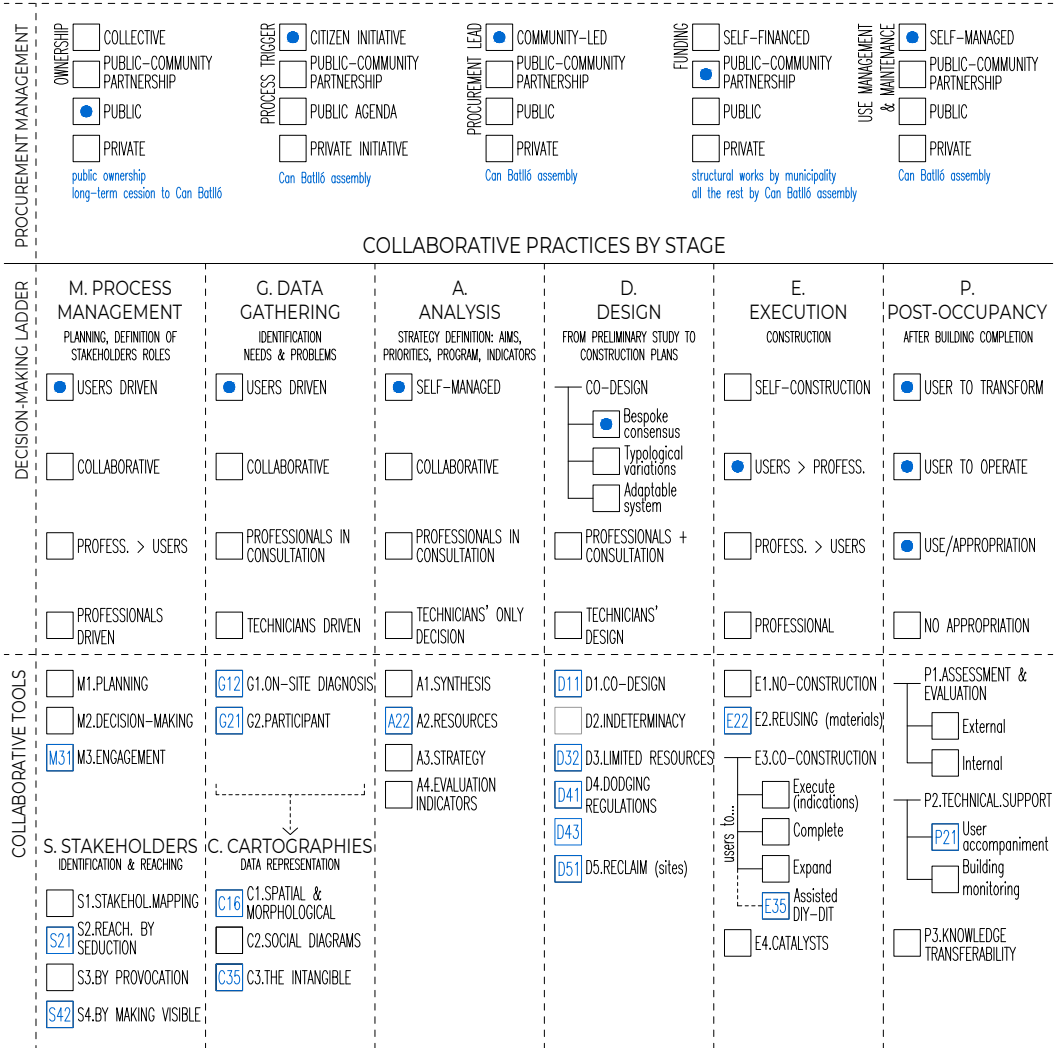
Professionals from different disciplines supported the project, from bricklayers to lawyers, during the negotiations with the municipality and the self-building of the space. They included a group of architecture students that went on to form the Lacol architects' cooperative some years later: they provided technical assistance and actively participated in construction work. As part of the recovery of the Can Batlló warehouse and its history of craft production, a carpentry workshop – as a workers' cooperative – was installed in one of the warehouses: this played a key role in the refurbishment of the warehouse complex.



Warehouse 11 meeting space.

W09 CAN BATLLÓ WAREHOUSE 11

WAREHOUSE 11



W. WORKS | FACILITY



Neighbours' assembly.

COLLABORATIVE TOOLS WAREHOUSE 11 (2012-13)

**M31
D51**

Process management > Co-organise / develop with + Design > Reclaiming empty plots

An agreement with the municipality allowed to develop a self-managed facility of public interest in an unused publicly-owned warehouse in Can Batlló Complex. The agreement included the definition of responsibilities: infrastructural construction works to the municipality and conditioning of the space by the Platform Can Batlló, managed through an assembly.

**S21
S42**

Stakeholders > Direct invitation + Printed media

Stakeholders and neighbours were reached through seduction (printed and digital media campaign) and via making the process visible.

**G12
G21**

Data gathering > Group walk + Diagnostic workshops

Collective on-site group discussions and assemblies allowed to examine the premises, closed for decades, and discuss about its optimal use.

**C16
C35**

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

A22

Analysis & Strategy > Available resources (I): inventory

An inventory of available materials and resources in Can Batlló was created.

D11

Design > Co-design workshops

With Can Batlló general assembly and its "Space Design work group".

D32

Design > Leveraging material scarcity

Design was developed considering existing limited and gathered materials.

**D41
D43**

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

The 'meanwhile' condition as defined by planning (developed but not applied) allowed to develop the area without a strict application of regulations, nor building permits.

E22

Execution > Recycling & reclaiming components

Some elements were built reusing materials of Can Batlló.

E35

Execution > Collective assisted DIY-DIT

Assisted self-construction of elements with the support of technical teams.

P21

Post-occupancy > Post-occupancy technical support

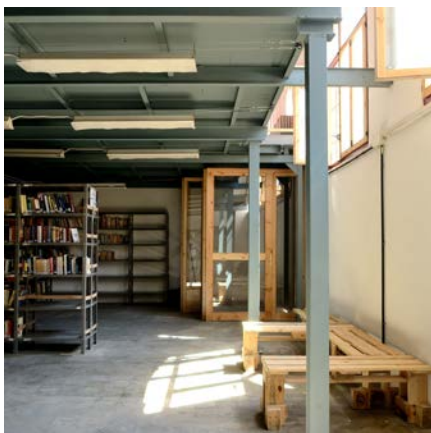
Architects were involved in the gradual construction of the different parts of Warehouse 11 and its post-occupancy.

W09

CAN BATLLÓ WAREHOUSE 11



Warehouse 11 self-construction.



W. WORKS | FACILITY

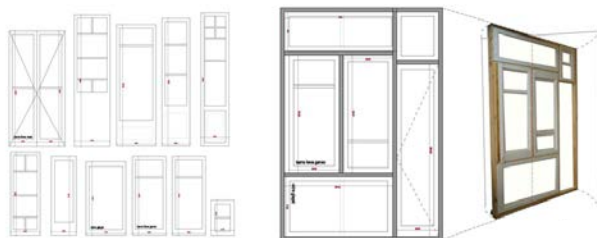
Warehouse 11: bar area and the Popular Library Josep Pons.

OUTCOMES

Warehouse 11 became a tactical operation to reclaim a space for the community in Can Batlló for social and meeting purposes, from which many other activities and working groups could be organised.

Warehouse 11, as a neighbourhood grassroots platform space, evidences residents' need to have self-managed spaces for gathering and organisation that can have a broader impact, as exemplified in the implementation of several neighbourhood initiatives that emerged from Can Batlló after 2011, including la Borda cooperative housing (W02), Coopolis (W10) and Arcàdia School (W11).

Warehouse 11 demonstrates the potential of a multi-stakeholder partnership: the municipal government, Barcelona Activa as a public training agency, the Can Batlló grassroots movement and its residents, and Can Batlló carpentry workshop as an autonomous initiative within Can Batlló. Warehouse 11 is evidence of the capacity of self-managed residents' organisations to manage public space and develop and consolidate neighbourhood activities. In other words, to implement activities which are of public interest in form and content but are not under the control of the municipality's political agenda in either respect. From the point of view of the administration, Warehouse 11 became an example of community-led transformation and management of a public facility, although developed with significant voluntary effort. As discussed in the case study of Coopolis (W10), the subsequent intervention in the warehouse included a higher input of professional construction work.



Detail of the library door, built with recovered material.



More information::

www.lacol.coop/projectes/bloconze-can-batllo

www.lacol.coop/projectes/connexio-vertical-bloconze

www.urbannext.net/bloconze-can-batllo

www.canbatllo.org

www.economiasocial.coop/ateneus-cooperatius

Images: courtesy of Lacol. Photographs by Lacol and Joan Massagué.

STAKEHOLDERS

Civic engagement	Coopolis Can Batlló neighbourhood association
Public administration	Municipality of Barcelona, cession of the space
Community architects	Lacol cooperative of architects
Technical staff	Fusteria de Can Batlló SCCL, Arkenova SCCL, M7 Enginyers, Societat Orgànica SCCL and Aumedes DAP

CONTEXT & AIMS

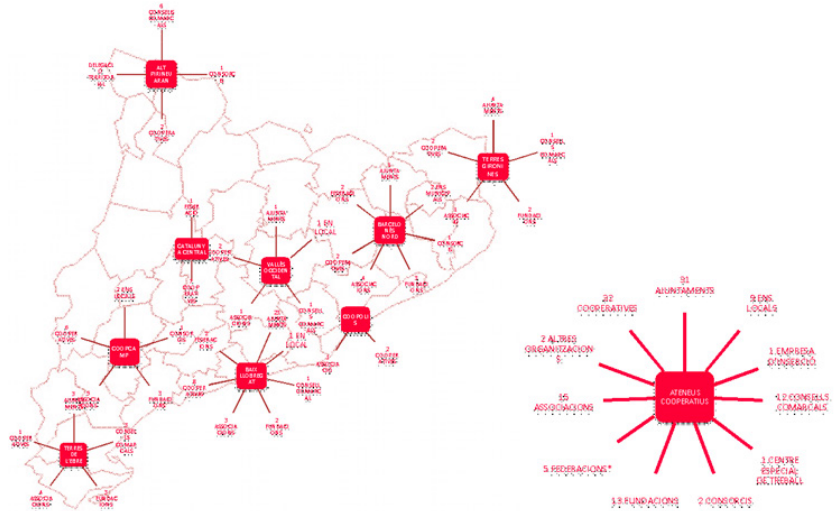
Coopolis is one of the series of warehouses consecutively refurbished in Can Batlló (W08). Work on Coopolis took place after Warehouse 11 (W09) was completed.

'Coopolis' refers to both the name of an institution and a space; a self-managed facility that aims to promote cooperativism and the Social and Solidarity Economy (ESS). Coopolis as an institution has become crucial as a legal entity, as one of the fourteen Ateneus of the Xarxa d'Ateneus Cooperatius (Network of Cooperative Ateneus), promoted in 2016 by the Catalan government with the program Aracoop, which aims to achieve a regional impact in the Social and Solidarity Economy (ESS) by offering technical assistance for cooperatives of all kinds.

Coopolis is temporarily based in Warehouse 8 in Can Batlló, built in 1880; there are plans to move it to another warehouse in the same complex in the future. An agreement with the municipality included the leasing of the space to the Can Batlló neighbourhood platform in order to develop a self-managed public service facility. The project was financed with public funding and built through a collaboration with Can Batlló's carpentry workshop cooperative.

Refurbishment of the warehouse started in 2017 with a tactical phase 0 that aimed to make a minimum space usable by building a wooden box in the warehouse and undertaking minimum adaptation of other spaces. This allowed the space to be used immediately, while the rest of the intervention was being planned and executed. In 2019 a larger-scale intervention took place in the rest of the warehouse with the construction of office and meeting spaces, also constructed in wood. Both interventions aim to make the historical heritage of Can Batlló visible through careful intervention and a minimal use of energy in both construction and post-occupancy phases. In designing a wooden building within a historical building, different areas of thermal comfort allow energy to be controlled efficiently. In addition, given the temporary character of the intervention, wood construction will be easy to disassemble and potentially transport to another location.

It is expected that Coopolis will move to a permanent space in the future in another warehouse.



Coopolis as part of a territorial structure of Ateneus. Source: www.coopcatcentral.cat.



Coopolis warehouse in first term. Behind, the biggest warehouse in Can Batlló, which is planned to become the Barcelona Archive. Source: www.bcn.coop. Image by Lacol.



Coopolis warehouse before transformation. Source: www.bcn.coop.

COOPOLIS

PROCUREMENT MANAGEMENT	OWNERSHIP	PROCESS TRIGGER	PROCUREMENT LEAD	FUNDING	USE MANAGEMENT & MAINTENANCE
	<input type="checkbox"/> COLLECTIVE <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <small>public ownership long-term cession to Can Batlló</small>	<input checked="" type="checkbox"/> CITIZEN INITIATIVE <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC AGENDA <input type="checkbox"/> PRIVATE INITIATIVE <small>Can Batlló assembly + Coopolis</small>	<input type="checkbox"/> COMMUNITY-LED <input checked="" type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <small>Can Batlló assembly + Coopolis + Municipality of Barcelona</small>	<input type="checkbox"/> SELF-FINANCED <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input checked="" type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <small>public investment</small>	<input checked="" type="checkbox"/> SELF-MANAGED <input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP <input type="checkbox"/> PUBLIC <input type="checkbox"/> PRIVATE <small>long-term cession of premises to Coopolis</small>

COLLABORATIVE PRACTICES BY STAGE

DECISION-MAKING LADDER	M. PROCESS MANAGEMENT <small>PLANNING, DEFINITION OF STAKEHOLDERS ROLES</small>	G. DATA GATHERING <small>IDENTIFICATION NEEDS & PROBLEMS</small>	A. ANALYSIS <small>STRATEGY DEFINITION: AIMS, PRIORITIES, PROGRAM, INDICATORS</small>	D. DESIGN <small>FROM PRELIMINARY STUDY TO CONSTRUCTION PLANS</small>	E. EXECUTION <small>CONSTRUCTION</small>	P. POST-OCCUPANCY <small>AFTER BUILDING COMPLETION</small>
	<input checked="" type="checkbox"/> USERS DRIVEN <input type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESS. > USERS <input type="checkbox"/> PROFESSIONALS DRIVEN	<input checked="" type="checkbox"/> USERS DRIVEN <input type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESSIONALS IN CONSULTATION <input type="checkbox"/> TECHNICIANS DRIVEN	<input checked="" type="checkbox"/> SELF-MANAGED <input type="checkbox"/> COLLABORATIVE <input type="checkbox"/> PROFESSIONALS IN CONSULTATION <input type="checkbox"/> TECHNICIANS' ONLY DECISION	CO-DESIGN <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Bespoke consensus <input type="checkbox"/> Typological variations <input type="checkbox"/> Adaptable system <input type="checkbox"/> PROFESSIONALS + CONSULTATION <input type="checkbox"/> TECHNICIANS' DESIGN	<input type="checkbox"/> SELF-CONSTRUCTION <input type="checkbox"/> USERS > PROFESS. <input type="checkbox"/> PROFESS. > USERS <input checked="" type="checkbox"/> PROFESSIONAL	<input checked="" type="checkbox"/> USER TO TRANSFORM <input checked="" type="checkbox"/> USER TO OPERATE <input checked="" type="checkbox"/> USE/APPROPRIATION <input type="checkbox"/> NO APPROPRIATION
COLLABORATIVE TOOLS	<input type="checkbox"/> M1.PLANNING <input type="checkbox"/> M2.DECISION-MAKING <input checked="" type="checkbox"/> M3.ENGAGEMENT	<input type="checkbox"/> G1.ON-SITE DIAGNOSIS <input type="checkbox"/> G2.PARTICIPANT <input checked="" type="checkbox"/> C1.SPATIAL & MORPHOLOGICAL <input type="checkbox"/> C2.SOCIAL DIAGRAMS <input checked="" type="checkbox"/> C3.THE INTANGIBLE	<input type="checkbox"/> A1.SYNTHESIS <input type="checkbox"/> A2.RESOURCES <input type="checkbox"/> A3.STRATEGY <input type="checkbox"/> A4.EVALUATION INDICATORS	<input checked="" type="checkbox"/> D11 D1.CO-DESIGN <input type="checkbox"/> D2.INDETERMINACY <input checked="" type="checkbox"/> D31 D3.LIMITED RESOURCES <input checked="" type="checkbox"/> D32 <input type="checkbox"/> D4.DODGING REGULATIONS <input checked="" type="checkbox"/> D51 D5.RECLAIM (sites)	<input type="checkbox"/> E1.NO-CONSTRUCTION <input checked="" type="checkbox"/> E2.REUSING (materials) <input type="checkbox"/> E3.CO-CONSTRUCTION <ul style="list-style-type: none"> <input type="checkbox"/> Execute (indications) <input type="checkbox"/> Complete <input type="checkbox"/> Expand <input type="checkbox"/> Assisted DIY-DIT <input type="checkbox"/> E4.CATALYSTS	<input type="checkbox"/> P1.ASSESSMENT & EVALUATION <ul style="list-style-type: none"> <input type="checkbox"/> External <input type="checkbox"/> Internal <input checked="" type="checkbox"/> P2.TECHNICAL SUPPORT <ul style="list-style-type: none"> <input type="checkbox"/> User accompaniment <input type="checkbox"/> Building monitoring <input type="checkbox"/> P3.KNOWLEDGE TRANSFERABILITY
	S. STAKEHOLDERS <small>IDENTIFICATION & REACHING</small>	C. CARTOGRAPHIES <small>DATA REPRESENTATION</small>			USERS TO...	
<input type="checkbox"/> S1.STAKEHOL.MAPPING <input type="checkbox"/> S2.REACH. BY SEDUCTION <input type="checkbox"/> S3.BY PROVOCATION <input type="checkbox"/> S4.BY MAKING VISIBLE						

COLLABORATIVE TOOLS COOPOLIS (2017 & 2019)

**M31
D51**

Process management > Co-organise / develop with + Design > Reclaiming empty plots

As in the case of Warehouse 11, an agreement with the municipality allowed to develop a self-managed facility of public interest in an unused publicly-owned warehouse in Can Batlló. In this case, the municipality was responsible for construction works, which were developed by "Can Batlló Wood workshop".

**C16
C35**

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

D11

Design > Co-design workshops

Architects met with the technical teams of Coopolis to develop the design of the space.

D31

Design > Intermediary situations: "the meanwhile"

A phase 0 was developed to start using the space before larger investment. Two interventions took place in 2017 and 2019, and it is planned to move Coopolis to another warehouse in the future.

D32

Design > Leveraging material scarcity

Construction system considered the economic and environmental impacts.

Professional execution

Construction works took place professionally. Wood interventions were developed by Can Batlló Wood workshop (a workers cooperative), located in one of the warehouses of the complex.

E23

Execution > Dismantling & reassembling buildings

Foreseeing a potential future dismantling, wood construction was chosen.

P21

Post-occupancy > Post-occupancy technical support

As part of the implication of the team of architects with Can Batlló.



Coopolis first intervention in 2017.



Phase 0, 2017.



Phase 1, 2019.



OUTCOMES

After the Warehouse 11 experience (W09), Coopolis gradually included and involved more professional expertise in the refurbishment of the Can Batlló premises. This provided more resources, as well as making it less dependent on voluntary work, which is often exhausting. In addition, the fact that the wooden construction was developed in the Fusteria Can Batlló ("Can Batlló Carpentry Workshop" had a positive impact on Can Batlló's cooperative structure. The public investment included construction work but not management, which was retained by the Can Batlló neighbourhood association. Along with other facilities, such as Ateneu Popular 9 Barris in Sant Andreu neighbourhood, self-managed since 1977, Coopolis represents an important moment in the municipality's understanding of the public provision of services, financed through public funding but retaining autonomous management.

The refurbishment of Coopolis is evidence of the successful strategy of splitting a larger intervention into consecutive phases. In the first phase, in 2017, a tactical intervention enabled the space to be used immediately, with a minimum transformation, without having to wait for two years until the next phase was executed. The second intervention is more complex in terms of construction and size; however, the same building criteria were applied. The fact that both are built with wood is an optimal response to the meanwhile condition of the warehouse before Coopolis is located in a new setting, allowing the construction to be dismantled for transfer to a new location, as well as minimising the need for permanent intervention in the warehouse after this.



Coopolis is expected to be moved to another warehouse of Can Batlló, Warehouse 4, in the future. Axonometry of the feasibility studies of Lacol for the new Coopolis location.

More information:

www.lacol.coop/projectes/coopolis-bcn-fase-0

www.lacol.coop/projectes/coopolis-espai-leconomia-social-progres

www.bcn.coop

www.canbatllo.org

Images: courtesy of Lacol. Photographs by Lacol and Alvaro Valdecantos.

STAKEHOLDERS

Civic engagement	Arcàdia school Can Batlló neighbourhood association
Community architects	MUT Collective, formed by self-organised undergraduate students of ETSAV Vallès School of Architecture
Technical staff	Jordi Mitjans, Coque Claret, Amadeu Santacana and Martí Obiols (ETSAV faculty, advisors) BAM BioArquitectura Mediterrànea, for construction with canes

CONTEXT & AIMS

Arcàdia school, a self-managed educational initiative that emerged from Can Batlló as an alternative to conventional state-run educational systems, needed a larger space for both indoor and outdoor activities. However, the long-term plan is to make a permanent intervention in one of Can Batlló warehouses. The MUT team consists of 18 students of architecture from ETSAV School of Architecture, organised around a general assembly and working groups. MUT's intervention was defined as a temporary improvement under a meanwhile condition before the school relocated. The architects collaborated closely with Arcàdia in order to define their needs and match them with the realistic possibilities offered by a tight budget.

The process lasted 18 months and was interrupted by the Covid-19 lockdown in Spain from 15 March to 21 June 2020. The lack of funding was addressed by working with partners and available resources: borrowing tools from Can Batlló and ETSAV, reusing materials, looking for sponsors, and a crowdfunding campaign.

With a budget of almost zero, the intervention took place in the outdoor space in the summer of 2020: playground areas were built with recycled tyres and cane (*Arundo donax*), in collaboration with BAM Bio Arquitectura Mediterrànea association.

Finally, the refurbishment of the indoor space and the exterior gallery took place in the summer of 2021, enabling the school to start using the premises at the start of the 2021 school year.



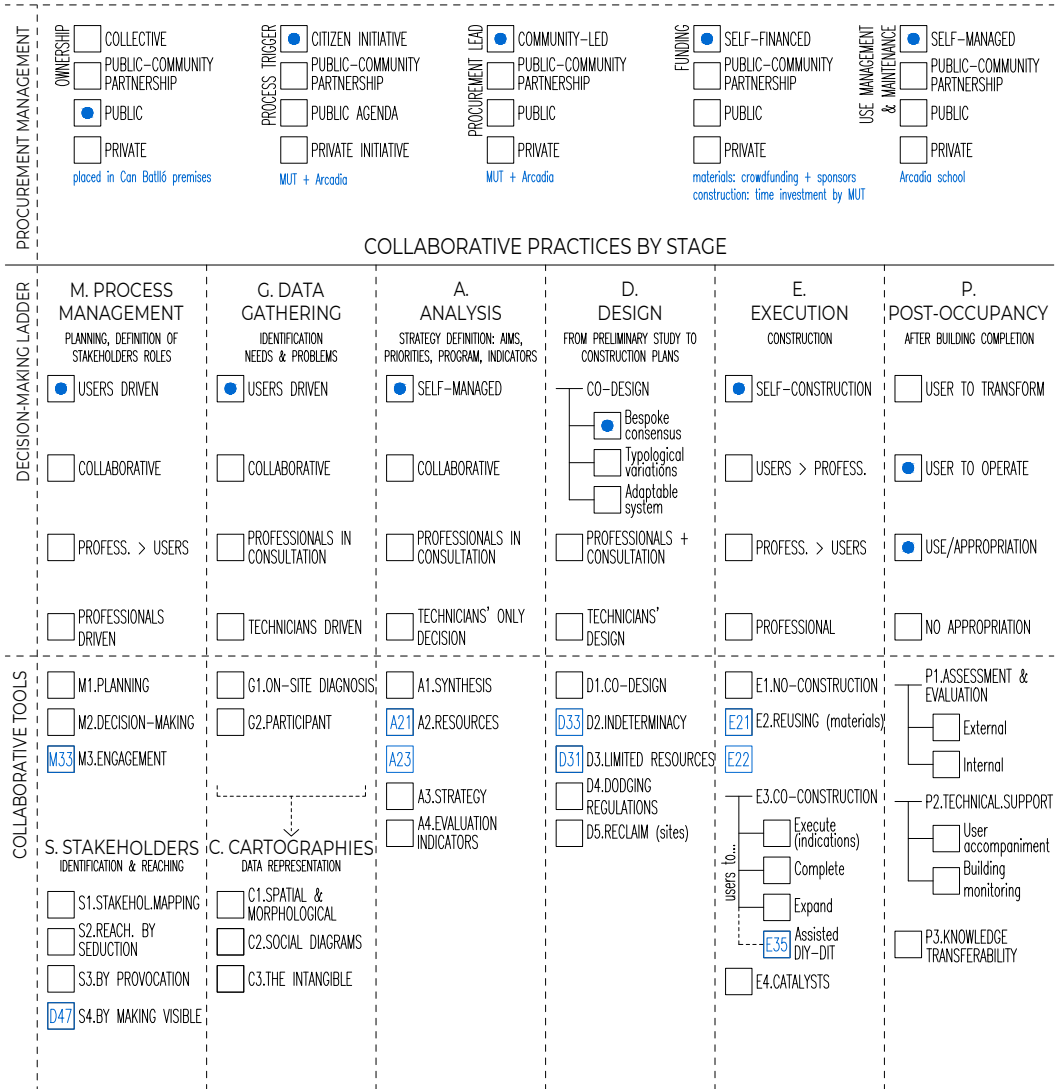
MUT and Arcàdia meeting.



Axonometry and as built.



ARCADIA SCHOOL



COLLABORATIVE TOOLS

M33

Process management > Discussion workshops

Discussions of needs and strategies took place between architects and Arcàdia school.

**A21
S47**

Analysis & Strategy > Financial analysis and co-finance strategies + Stakeholders > Video

A work group looked for sponsors and developed a crowdfunding campaign, in which a promotional video (www.youtube.be/OrxhyCic_0Q) was included.

A23

Analysis & Strategy > Available resources (II): "harvest map"

Can Batlló as a complex with several abandoned warehouses became an excellent field for recycling materials. A "harvest map" was developed, along with a catalogue of found materials.

D23

Design > Enabling: adaptable system

The indoor space is thought as an enabling surface with mobile artefacts that allow different uses.

D31

Design > Intermediary situations: "the meanwhile"

It is planned that Arcàdia school will have a new refurbished space in one of Can Batlló's warehouses. However, until this can take place, an improvement of existing conditions is needed.

E21

Execution > Borrow - barter

Tools were borrowed from ETSAV School of Architecture and Can Batlló complex.

E22

Execution > Recycling & reclaiming components

For the outdoor spaces, recycled tyres were used. For the inside furniture, a wooden mezzanine in one of Can Batlló's warehouses was dismantled and the wood reused.

E35

Execution > Collective assisted DIY-DIT

Construction was developed by architects; no professional construction took place.



Deconstruction of the mezzanine in Can Batlló warehouses and "harvest map".



The construction of outdoor spaces included future users as participants.



Construction works of indoor (left) and exterior gallery (right).



Exterior gallery as built.

OUTCOMES

The first proposals developed by MUT team took place during the Covid-19 lockdown in 2020. The impossibility of understanding the daily functioning of Arcàdia School, which is significantly different from conventional schools, resulted in difficult communication between architects, who proposed designs that, according to Arcàdia, did not fulfil their needs. After lockdown, in-person meetings enabled much more fluid communication and a better understanding of the school's needs. This was encouraged by activities such as the construction of the outdoor space during the summer and visits by the architects to the school in September to observe the way the space performed directly.

The meanwhile condition of Arcàdia, pending its relocation to another warehouse, drastically reduced the available resources. The success of the intervention was only possible with the significant voluntary involvement of participants and the employment of strategies based on the reuse and recycling of materials. The architects acknowledge that the length of the project, a year and eight months, resulted in fatigue and weakened the motivation of some the participants. Thus, the implementation of this sort of refurbishment needs to take into consideration both the time involved and the volunteering context.



Indoor artefacts, prototype and axonometry.

More information:

Arcàdia School website: www.arcadiacb.info

Promotional video: www.youtube.be/0rxhyCic_0Q

www.instagram.com/mut.etsav

www.xarxanet.org/projectes/noticies/arcadia-i-mut-una-escoleta-basada-en-larquitectura-joc

www.twitter.com/mut_etsav

www.etsav.upc.edu/ca/noticies/8115

www.canbatllo.org

Images: courtesy of MUT.

STAKEHOLDERS

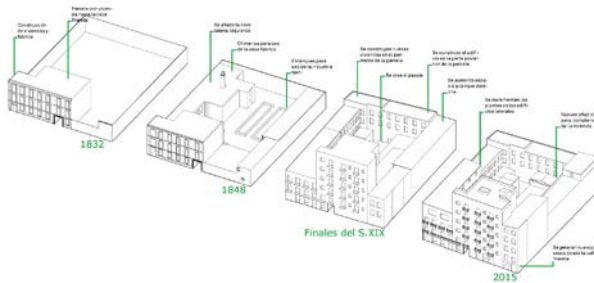
Civic engagement	Associations and residents of Can 60: Capoeira Canigó, Factoria Heliográfica, Posada la Europea, Estaca and AM (art workshops), R20bis (bike workshop), Apip foundation (social integration flats), la Poderosa (dance studio), Can Fanga (ceramics workshop), residents in 10 flats. Associations: Sostre Civic housing cooperative, Tot Raval, Fundació Arrels, Impulsem
Public administration	Municipality of Barcelona CCCB Culture Center (Citizen's Technical Consultation Office)
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

CONTEXT & AIMS

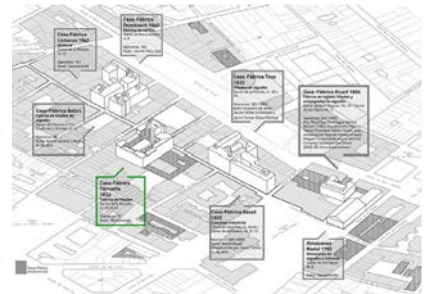
Can 60 is one of the best examples of casa-fábrica (house-factory) typology in Barcelona: the form that the first factories took before the demolition of the city walls in the nineteenth century and their migration to Poblenou. These typically consist of a block with workers' housing round the perimeter and a roofed central area for industrial production, separated by a central narrow alley that served as a means of access. Built in the Raval neighbourhood, in Barcelona city centre, Can 60 is today part of a social ecosystem with a fragile balance between the ambition of profit-driven urban development and a very heterogeneous social fabric with a mixed immigrant population, people at risk of social exclusion and new incomers attracted by the cultural life and universities. However, the whole block was acquired by a foreign investment group, which aimed to demolish the factory to build luxury flats for tourists. The loss of its architectural heritage would have damaged the neighbourhood and increased the rapid gentrification of the area. In addition, if the building disappeared, significant intangible heritage would be lost, and with it the ties with the social fabric within which Can 60 exists would be broken: this would include the disappearance of the several institutions and associations resident in Can 60 that make a significant contribution to cultural life, both local and international. Stakeholders designed a short-term and a mid-term strategy to "save Can 60", within the context of the Piso Piloto Exhibition at CCCB centre Barcelona in 2015. The short-term strategy consisted of preparing an exhibition to coincide with Raval's annual community festival, highlighting the productive activity of Can 60 – i.e., what would be lost – and opening up the building to the neighbourhood to make local social demands visible. In parallel, the long-term strategy included a technical report that aimed to produce arguments and graphic evidence to convince the administration to preserve the building, developing both a spatial and a social cartography of the building, outlining the underlying pathology of the building and the cultural and social impact of the different organisations that Can 60 hosted.



"Diagnosis table", key meeting that gathered all stakeholders, unaware of their shared expulsion threat.



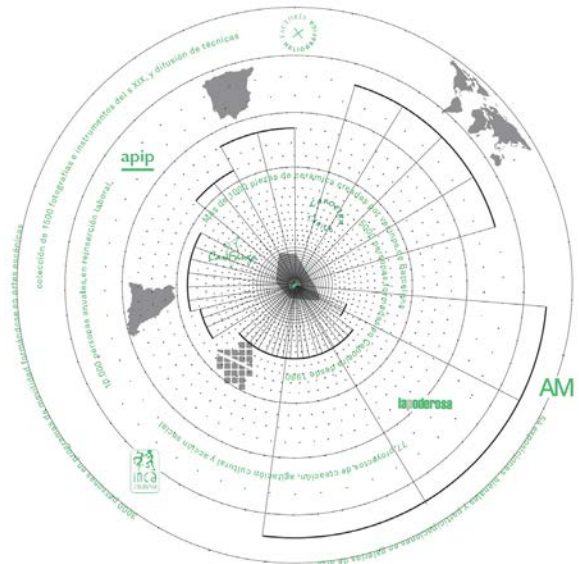
Can 60 casa-fábrica (house-factory) evolution.



Factory Houses in Riereta Street.



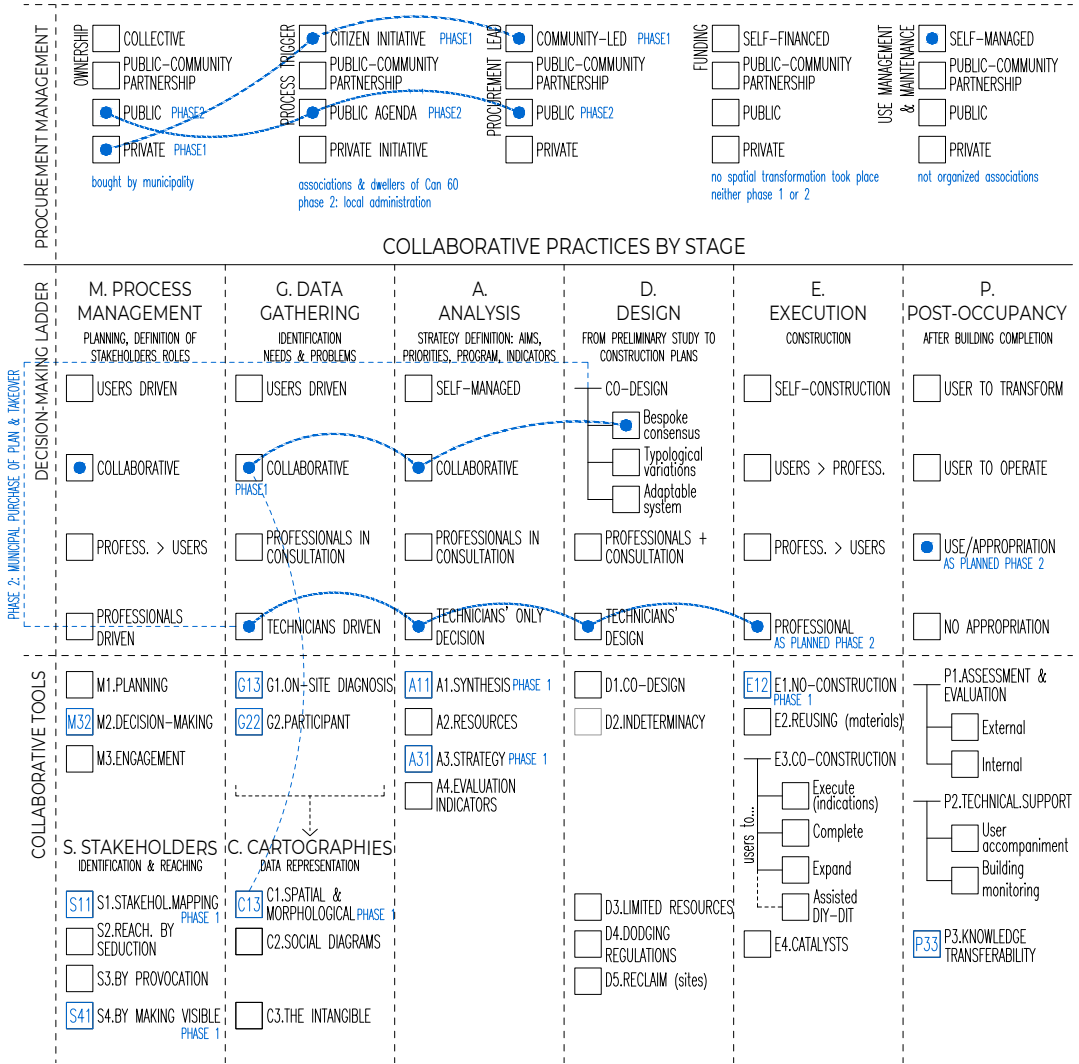
Left: exhibition in central alley exposing the production of Can 60 – what would be lost – as shading structures.



Right: Can 60's associations stakeholders diagram, describing their impact at different scales.

W12 CAN 60

CAN 60



W. WORKS | FACILITY



Media campaign "Save Can 60".

COLLABORATIVE TOOLS

PHASE 1 CHRONOLOGICALLY

G13
S41

Data gathering > On-site technical support office + Stakeholders > Collaboration with external events
Can 60's situation was alerted through a free Citizen's Technical Consultation Office set in July 2015 within the framework of Piso Piloto exhibition at CCCB by AC and Pei.Lab PUJ.

S11

Stakeholders > Identify stakeholders

Through meetings with stakeholders, a mapping of associations and workshops in the building was developed, along with a diagram of their social and cultural impact.

G22
E12

Data gathering > Meetings with stakeholders + Execution > Do not do (II): connect

Can 60 dwellers gathered around a "diagnosis table", where they discovered that they were unaware of other tenants' same situation. This united them to create a joint strategy for the first time.

C13

Projective cartography > Building as socio-spatial ecosystem

The cartography included both the social layer of associations, their activities and impact, and the building with its spaces, deficiencies and pathologies.

A31

Analysis & Strategy > Strategic action plan

Consisting of short and long-term strategies. First, to make visible the problematic and claims. Secondly, a technical report aiming to convince the municipality to preserve the building.

A11

Analysis & Strategy > The (yellow) manifesto

The manifesto became a key document to clarify goals and strategies.

S41

Stakeholders > Collaboration with external events

In order to make the claims visible, a public event was organised with Raval festival aiming to achieve the maximum visibility. In addition, the on-site office was placed in a CCCB exhibition.

P33

Post-occupancy > Process reports

A process report is available at www.arquitectosdecabecera.org.

M32

Process management > Involving decisive partners

Preserving the building escaped the competences and possibilities of both technical staff and dwellers. Thus, effort was placed in convincing the administration to join the struggle.

PHASE 2

Public administration procurement

After a year of conversations between the different parts with the assistance of AC team, the administration bought the building. BIMSA, a municipal company for public facilities development, organised a public design competition in 2017 and is developing the project with Ravetllat Arquitectura.



grafia actual

Building cartography.

OUTCOMES

Can 60 evidenced the transformative capacity of local associations and academia in achieving an effective outcome in the city. On the one hand, it convinced the municipality of the importance of preserving the building, which aligned with their political agenda. After a year-long process of negotiation, in September 2016 the municipality bought Can 60, with the intention of transforming it into a public facility. Moreover, as a legislative outcome, the preservation campaign became highly successful in this regard, since Can 60 acted as a catalyst that ended up with the listing of 38 cases-fàbricas in the Raval neighbourhood. On the positive side, the building is publicly owned and will be preserved. However, unlike other cases, such as Warehouse 11 (W09) or Coopolis (W10), where the municipality understood the exceptionality of the projects as resulting from social struggle, the transformation of Can 60 from a neighbourhood associations hub to a civic centre became part of the standard public procurement mechanisms and protocols through the public agency Barcelona d'Infraestructures Municipals (BIMSA, Barcelona Municipal Infrastructures). Due to the political decisions that were made, most of the stakeholders involved in the social movement that preserved the building were left out of the process. In addition, community architects involved in the preservation phase were excluded from the process by the organisation of a public architecture competition with strict entry requirements. Overall, the development through the standard mechanisms, directed toward building procurement and taking no account of its social dimension (addressed by another municipal department that was not involved in the project), undervalued the contribution of stakeholders involved in the demands that had motivated the preservation of the building.

The refurbishment project is being developed by Ravetllat Arquitectura, who won the 2017 competition. As of 2022 (seven years after the struggle and five after the competition) no construction work has started. Some of the associations have left Can 60, while others still use the space with no clear moving date. Since major works are planned, the building is in a continuous process of decay, although some minimal work has taken place. This situation questions the "all or nothing" attitude of municipal administration when addressing heritage, increasing the need for meanwhile temporary low-cost interventions that prevent deterioration, such as the ones carried out in Coopolis (W10) and Escocesa Warehouse L (W13).



Can 60 refurbishment, project by Ravetllat Arquitectura. Source: ravetllatarquitectura.com.

[More information:](#)

www.arquitectosdecabecera.org/AC/en/portfolio/salvem-can-60

www.ravetllatarquitectura.com/Can-60

Images: courtesy of Arquitectos de Cabecera and Ravetllat Arquitectura (this page).

STAKEHOLDERS

Civic engagement	Artists' association La Escocesa Creation Factory
Public administration	–
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

CONTEXT & AIMS

Warehouse L is part of the industrial complex of a Escocesa in the Poblenou neighbourhood, Barcelona, that was abandoned for many years and eventually partly reconverted into a self-managed creative centre. Despite being owned by the municipality, it has been under constant threat in a neighbourhood that has been significantly transformed in the past two decades as a result of the 22@ masterplan, accompanied by frequent protests about the erasure of the neighbourhood's past and the extreme gentrification of the area. In 2019 it presented a complex and fragile scenario: an artists' community was resident in the central buildings and a comunidad gitana (traveller community) and small workshops in those on the perimeter. In terms of buildings, only one of the warehouses was officially used by artists, while many were in poor condition.

The project aimed to renovate a second warehouse for artists' studios. The first intervention in Warehouse L took place in summer 2019, when the space was used for an academic summer workshop in exchange for improvements to the building that were made during this period. The walls that covered up windows and doors were demolished and a new connecting door was built with recycled materials. The space was inaugurated with a temporary spatial alteration, an inflatable "air barricade", that enabled the newly imagined space to be rediscovered. In the months following the workshop, several construction projects took place to further renovate the space with the participation of different stakeholders: from floor repairs carried out professionally and window construction by la Escocesa maintenance staff to a final two-day construction workshop in which artists and architects built partitions with recycled materials.

Given the scarcity of materials, acquiring donations from museums and private companies became a crucial step for the success of the construction. This last intervention had to be removable and adaptable, so the use of (second-hand) metal props was decided on as the best option: in addition to functioning as a structural reinforcement, since the first-floor roof structure was unstable, it became an adaptable and appropriate system. Finally, artists started using the space and adapted it to their needs.

As a result of the process, the warehouse was able to open in early 2020 with new artists' studios and shared spaces. Construction works took place a-legally with a minimum budget: 420 m² of the space was restored with a budget of 48 €/m², way below any standard for public facilities construction or refurbishment.



Left: Aerial view from la Escocesa complex, with Warehouse L highlighted. Source: google earth. Middle: street view in 2019. Right: Foseco Warehouse, in la Escocesa, collapsed due to public administration inaction.

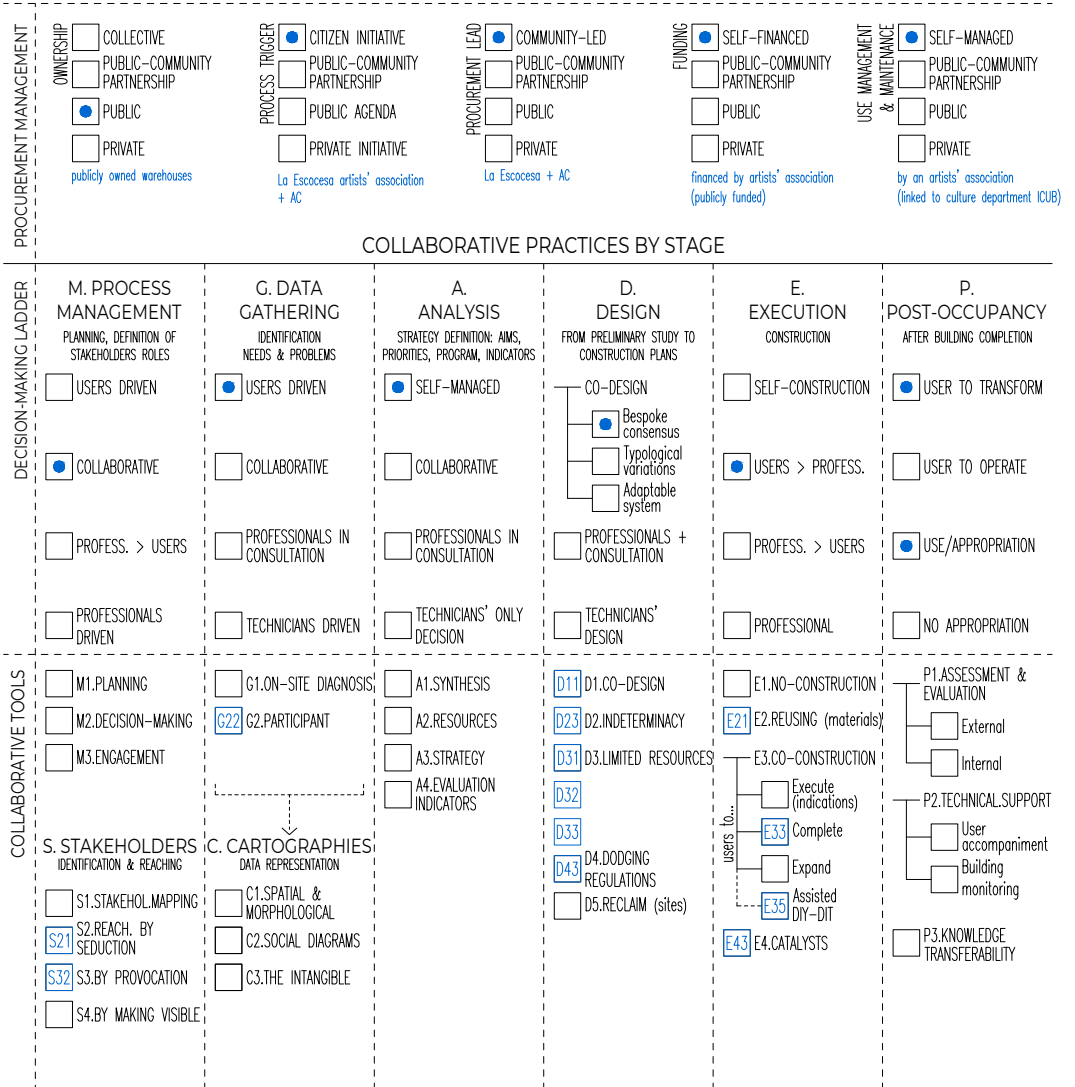


Warehouse L as found.



Several moments of the process: original state, construction phases, and finally artists' completion of the studios and space appropriation.

LA ESCOCESA WAREHOUSE L



COLLABORATIVE TOOLS

time
↓

G22
E21

Data gathering > Meetings with stakeholders + Execution > Borrow - barter

Through an agreement with the artists association "la Escocesa", the space was used for a summer workshop in exchange for the opening and conditioning of the space. Meetings were held with the artists and the gipsy community in order to agree on how to intervene in the complex.

D31

Design > Intermediary situations: "the meanwhile"

To prevent the warehouse's collapse as a result of abandonment the intervention aimed an immediate use and stop deterioration.

S21
S32

Stakeholders > Direct invitation + Spatial alteration

After the first opening of the warehouse, the construction of inflatable structures became an opportunity to rediscover a space that had been locked for decades. An invitation was left in the door of each artist's studio of La Escocesa to invite them to the spatial alteration happening.

E43
D43

Execution > Do it anyway + Design > Declaring a Temporary Autonomous Zone

The demolition and construction works took place without permits, given that la Escocesa is an area of artist experimentation.

Professional construction

One of the exterior walls and the reparation of the pavement were carried out by professional work.

D11
D23

Design > Co-design workshops + Enabling: adaptable system

Studios co-designed with wooden DM boards attached to removable structural support props, allowing an easy reconfiguration of the space. Modifications happened from early post-occupancy.

D32
D33

Design > Leveraging material scarcity + Designing for low-risk construction

The lack of resources required a design "with whatever available", minimizing construction costs, reusing materials for the door and looking for donations, for example DM boards from a museum.

E35

Execution > Collective assisted DIY-DIT

Studios were built by artists and architects in a weekend-long construction workshop.

E33

Execution > User to complete

Due to both material scarcity and users' profiles, studios were left incomplete. The intervention intended to maximise the degree of openness to user's manipulation through construction techniques and material choices.

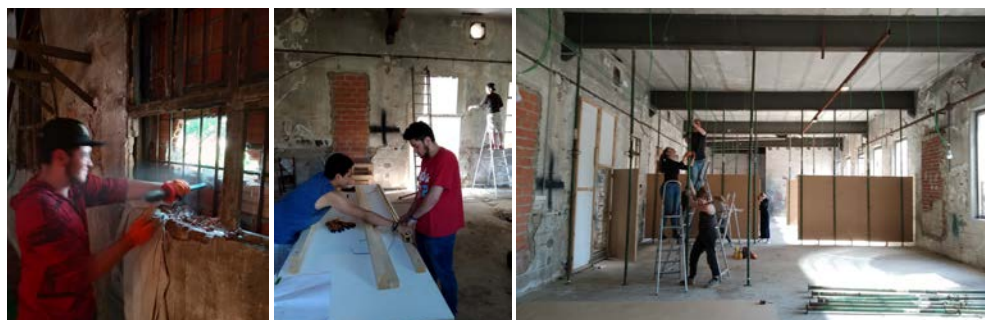


Spatial alteration during ETSAB summer workshop in 2019, using inflatable architectures.

W13 LA ESCOCESA WAREHOUSE L



Decision-making meeting with the artist's association members and director.



Demolition, door construction, and studios construction process.



Images from studios before artists' appropriation, photos by Gabriele Basilico.



Warehouse L a year after the construction of the studios. Some studios were easily reconfigured thanks to the assembly system.

OUTCOMES

Warehouse L became a successful informal self-built refurbishment of a listed building with the aim of preserving civic heritage, opening up the space after decades of closure and claiming it for artists to use as studios. Today, despite the fact that the current condition of the building is far from meeting the desired building standards as a result of budget constrictions, Warehouse L operates successfully as an artists' space and is constantly being adapted to meet new needs, evidencing that the right choices of materials and construction have been made.

Away from fostering the consolidation of precarious conditions, the relevance of this project lies in the fact that this intervention was not planned by the municipal administration as its owner, nor was it anticipated (but was desired) by the artists' community. An informal intervention became a protest against the inaction of the municipal administration (due to limited resources) and against an approach of planned obsolescence in heritage buildings (sometimes resulting from political agendas), which traditionally justifies further demolitions.

Contrasting with the nearby Warehouse Fosco, which collapsed after years of inaction, with a refurbishment project ready to be executed, Warehouse L aimed to create an intermediary condition that enables explicitly temporary uses that improve conditions for the first users and prevents the planned deterioration of warehouses. La Escocesa exemplifies the need to address the "meanwhile" conditions of buildings with temporary low-budget removable interventions that allow immediate use and stop the building decaying, as seen in Warehouse 11 (W09) and Coopolis (W10). In addition, la Escocesa, in the same way as Warehouse 11, evidences the potential of local communities to develop these kinds of interventions if the municipality has limited resources. In 2022, the warehouse is awaiting investment to consolidate the studios with more comfortable conditions.



New door connecting new studios with old ones.

More information:

www.arquitectosdecabecera.org/AC/en/portfolio/nau-la-escocesa

www.laescocesa.org

Images: courtesy of Arquitectos de Cabecera.

PAS A PAS

(e)co Platform is part of Pas a Pas project in Les Planes neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

(e)co PLATFORM

The (e)co Platform team project consists of a reiteration of the (e)co project that was originally built for the European Solar Decathlon competition in Madrid in 2012 as a self-managed cultural communal facility linked to a civic centre. The nature of the building as a light assembly structure offers the possibility of dismantling and reassembling it in a new location in the future. After being installed at ETSAV as a student space, in its third assembly it was adapted as a community space for the local residents of les Planes within the project Pas a Pas (W05).

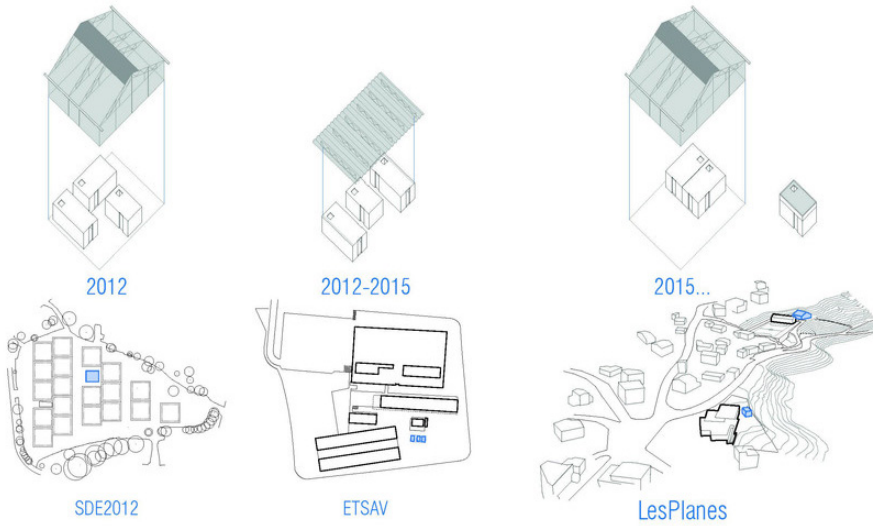
The analysis and design for the reinstallation of the project, linked to a neighbouring civic centre, was developed by Arqbag architects' cooperative. The building was leased by ETSAV to the municipality, who financed the project with 70,000 € for its reassembly on public land. The construction was paused during 2015 and partly vandalised, and finally completed in 2016.

User support and community engagement activities were developed by Arqbag and a residents' working group, under public commission scheme, over eighteen months. The (e)co Platform became an on-site office for the Pere Grau Space project (W15).

OUTCOMES

The relocation of an assembled pavilion to the (e)co Platform was both a result of, and a catalyst for, synergy in the local community, including public and private partners, the neighbourhood and academia. The platform was made possible thanks to an agreement between three partners: the university, that leased the building, the municipality, that provided the land and funding for its reconstruction, and the local community, who manage it. In addition to its use as a self-managed space linked to a civic centre, the (e)co Platform served as an on-site office for the design of the nearby Pere Grau Space (W15).

Its nature as a building disconnected from services networks was not considered in any of the regulations applicable at that time. In this regard, the (e)co Platform can be considered a Temporary Autonomous Zone (TAZ) (D43), with the complicity of the administration, enabling it to foresee regulatory changes and test building solutions. The disconnection of the building from services networks produced the need to train users, as well as offering the opportunity for building performance monitoring, producing a pedagogical impact on users, municipal technical staff and architecture students. In addition, during the first months of use, Arqbag developed a project to animate the space and organise activities with users, as commissioned by the municipality. This served to reveal to the municipality the importance of post-occupancy stage support.

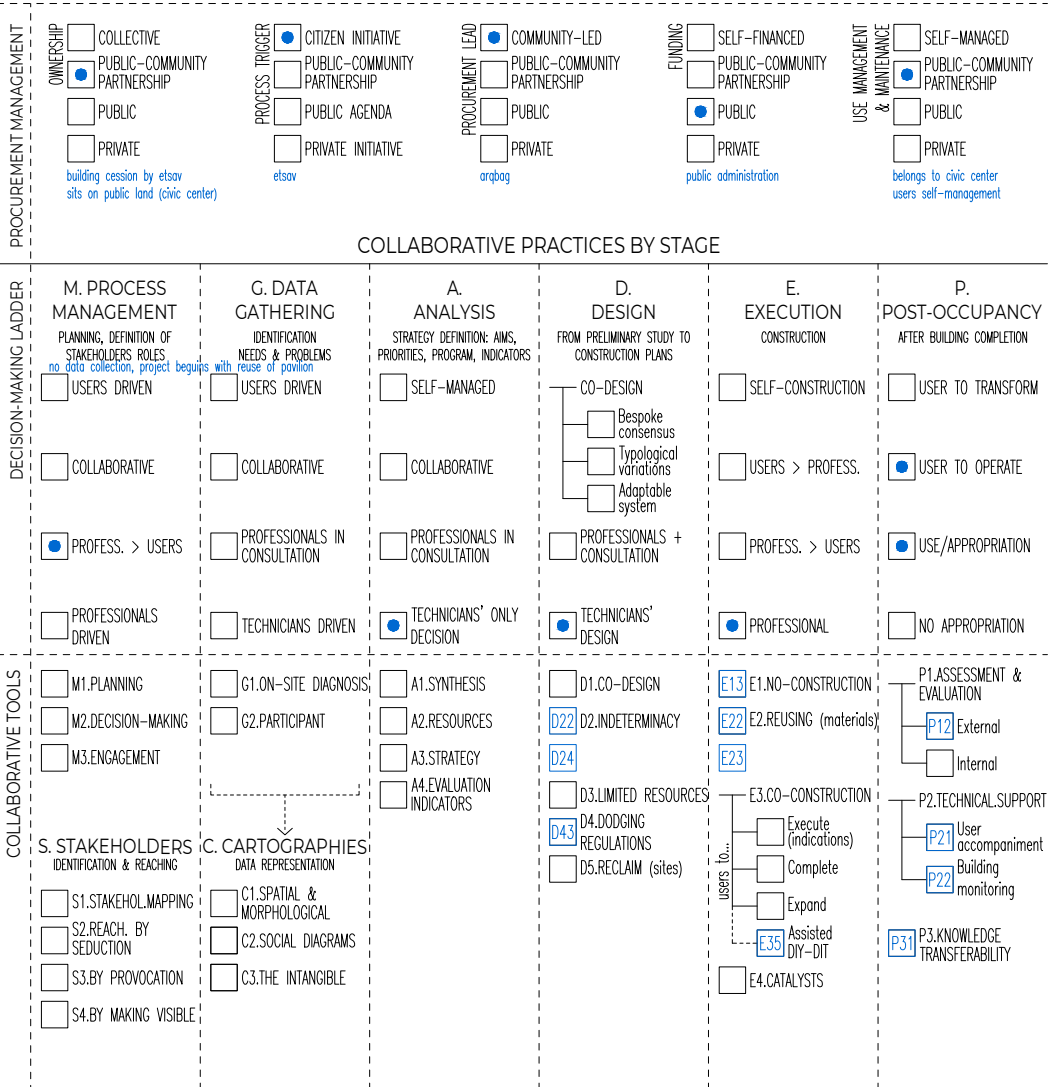


(e)co prototype in three different sites with different layouts: Solar Decathlon Europe competition in 2012 (top left), in ETSAV campus as an educative space (2012-2015) (below left) and in les Planes neighbourhood as a community centre (2015-currently) (right; picture by A. Flajszer).



(e)co Platform community center (pictures by A. Flajszer).

(E)CO PLATFORM



COLLABORATIVE TOOLS

Academic + public administration collaboration

The success of the other projects in Pas a Pas encouraged the parts to continue with the collaboration. (e)co platform consisted in the moving of a pavilion from ETSAV to a public facility.

D24
E23

Design > Typological variations + Execution > Dismantling & reassembling buildings

Industrial construction systems allowed dismantling and reassembling it in different locations with different functions. In each new assembling (Solar Decathlon competition, ETSAV and Les Planes) the building accommodated its form to specific needs.

D22
E13

Design > Enabling: user manipulation + Execution > Reprogramming time in space

The space could be adapted in relation to different needed uses. In addition, activities were programmed in relation to comfort temperatures achieved.

D43

Design > Declaring a Temporary Autonomous Zone

Although the building was disconnected from services network (sewers, electricity) it did not fulfil regulations at that time. It was developed and implemented with the approval of the municipality.

E35
E22

Execution > Collective assisted DIY-DIT + Execution > Recycling & reclaiming components

Co-construction workshops were developed with reused materials.

P12

Post-occupancy > External evaluation: stakeholder review

Workshop with users allowed to review the process and the performance of space.

P21
P31

Post-occupancy > Post-occupancy technical support + Manuals & toolkits

Arqbag developed a task of dynamisation of space in relation to activities and building performance. In addition, they developed instructions for energetic performance of the building

P22

Post-occupancy > Building monitoring

Monitoring of the building energetic performance increased awareness of users on carbon footprint and energetic consumption.

On-site technical support office

(e)co Platform became an on-site design office for the next project of Pere Grau Space. Activities developed there include analysis workshops and meetings with neighbours in the diagnosis phase.



(e)co Platform community centre under construction (left) and as used (right).

PERE GRAU SPACE

Les Planes Neighbourhood, Sant Cugat del Vallès | 2014-2017

STRATEGICAL

PAS A PAS

Pere Grau Space is part of Pas a Pas project in Les Planes Neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

PERE GRAU SPACE

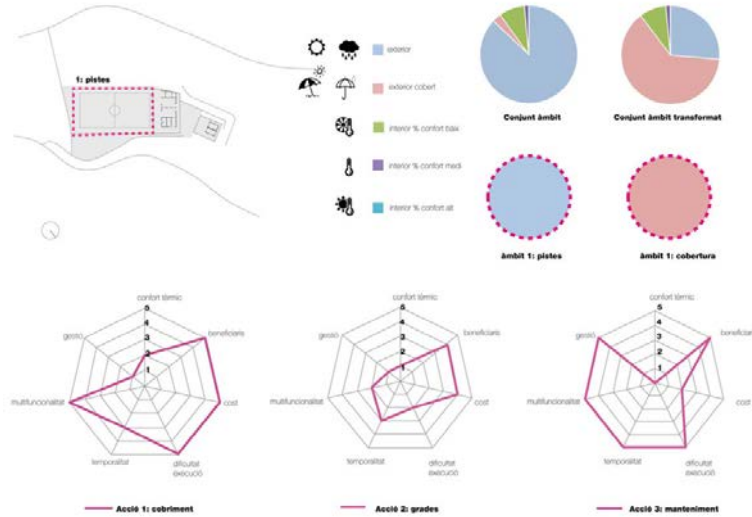
Pere Grau Space consists of the development of an existing playing field for sporting and community activities. The project is located near (e)co (W14), which served as an on-site office. The project was commissioned by the municipality and led by Arqbag, within the Pas a Pas project (W05). The design guidelines emerged from a “participative process” with representatives from different neighbourhood associations: a light roof for the entire field with no vertical façades, and the possibility of future interventions such as spectator seating or a new vertical extension on top of the changing rooms. The building makes the most of pre-existing elements, in aiming to reduce costs: the existing retaining wall on one side of the playing field becomes the sole foundation of the new “T”-shaped structure. The weight of the roof is counterbalanced by a stone counterweight on the shorter side of the structure. The existing walls collect rainwater at the high point of the land and generate three biodiversity nodes, helping to dissolve the human-made boundary between the city and the Serra de Collserola Natural Park. The roof allows the space to be appropriated for a new set of social, cultural and sporting activities, and encourages the appropriation of new spaces, promoting the transformation of the whole Pere Grau area. The Pere Grau area has now become a new social centre and meeting space for the neighbourhood.

OUTCOMES

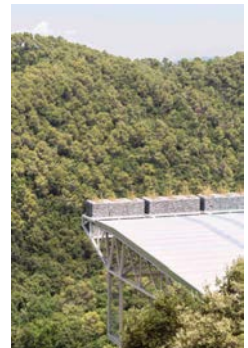
Espai Pere Grau offered evidence of the potential of a successful collaboration between the municipality and the university at two different points. One of these was a testing ground for the training of professionals who would go on to develop the Community Energy Refurbishmen (W06). The second was during the construction of the space itself, which required professional construction skills due to the nature of the work to be carried out. Between these two points, the diagnosis and co-design phase proved the value of an efficient approach to the improvement of a community space, which translated into a positive reception from users in the post-occupancy phase. In this regard, the nearby (e)co pPlatform (W15) became a useful meeting space as an on-site office.



Original condition and meeting with local community.



Diagnosis phase, analysis of requirements (top) and parameters of the three moments of the intervention: roof, grades and maintenance (below).



Pere Grau Space during construction (top left) and as built (all other images).

STAKEHOLDERS

Civic engagement	School direction, students, teachers, non-teaching staff, and families of the following public schools of Santa Coloma de Gramenet: Fray Luis de León, c/Sant Joaquim, 91 Jaume Salvatella, av. de Francesc Macià, 124 Lluís Milet, c/ Lluís Millet, 22 Mercè Rodoreda, c/ de Milà i Fontanals, 59 Miguel de Unamuno, c/ d'Àngel Guimerà, 10 Serra de Marina, c/ Mossèn Camil Rosell, 96
Public administration	Municipality of Santa Coloma de Gramenet, Àrea Metropolitana de Barcelona (AMB)
Community architects	Equal Saree (Helena Cardona Tamayo, Julia Goula Mejón and Dafne Saldaña Blasco)

CONTEXT & AIMS

The project "Empatitzem, let's rethink the use of schoolyards"* is based on the importance of the school playground as a space for learning. It seeks to reimagine school playgrounds based on gender equality, cooperation and inclusive values. Rather than being merely a project about the transformation of space, this is above all about a pedagogical and participatory process.

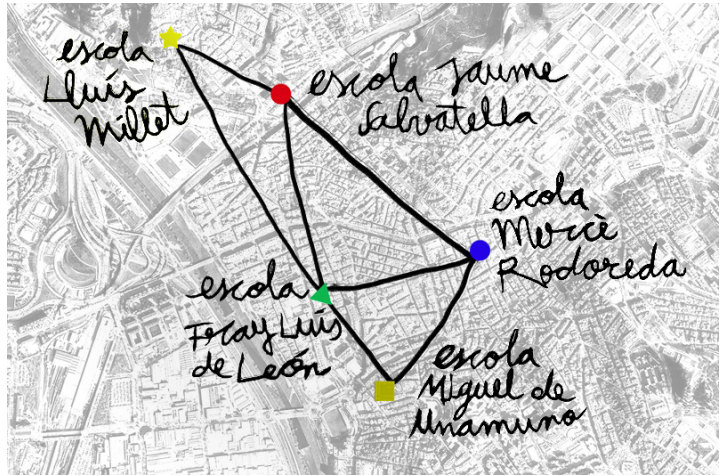
Between January and May 2018 five schools developed a critical analysis of playgrounds as well as improvement proposals, while a sixth undertook the same process later. The educational community, composed of teachers, students, families and non-teaching staff, analysed the space, reflected on relationships and values, offered ideas for improvement and, finally, agreed on proposals that were put into practice. Some activities were developed by architects and others by working groups from the schools, made up of members of the school management team, teachers, families and in some cases non-teaching staff; they received three training sessions from architects to develop each of the phases of the project: diagnosis, synthesis and design.

All the projects are currently completed or in process. Part of the execution was developed by municipal teams, while the rest went to public tender. In addition, local children created wall paintings and murals, guided by the artist Perriene Honoré.

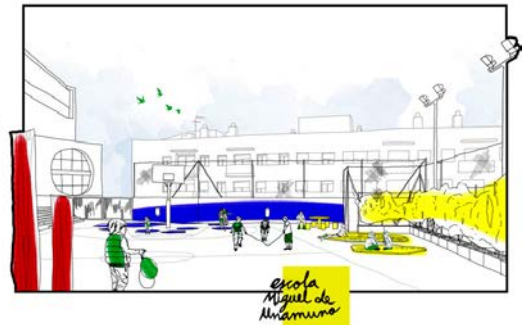
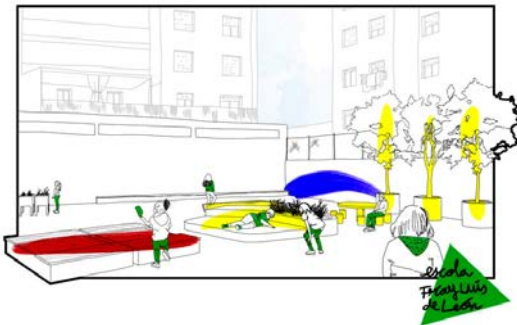
The methodology that was followed was later published in the form of a toolkit, "El Pati de l'Escola en Igualtat". This is available online in English: equalsaree.org/es/mediateca and published by Pol-len Edicions in 2019: *El Pati de l'Escola en Igualtat: Guia de Diagnosi i d'Intervenció amb Perspectiva de Gènere*.

*a play on words: empatitzar = empathize and pati = playground.

— information received from the architects, translated and adapted by the author.



Location of the five first schools involved in Empatitzem, Santa Coloma de Gramenet.

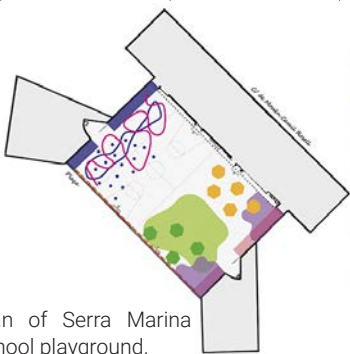


Fray Luis de León and Miguel de Unamuno schools, before the intervention and as designed by Equal Saree.

COEDUCATIVE PLAYGROUNDS

PROCUREMENT MANAGEMENT		COLLABORATIVE PRACTICES BY STAGE									
OWNERSHIP	<input type="checkbox"/> COLLECTIVE	PROCESS TRIGGER	<input type="checkbox"/> CITIZEN INITIATIVE	PROCUREMENT LEAD	<input type="checkbox"/> COMMUNITY-LED	FUNDING	<input type="checkbox"/> SELF-FINANCED	USE MANAGEMENT & MAINTENANCE	<input type="checkbox"/> SELF-MANAGED		
	<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP		<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP		<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP		<input type="checkbox"/> PUBLIC-COMMUNITY PARTNERSHIP				
	<input checked="" type="checkbox"/> PUBLIC		<input checked="" type="checkbox"/> PUBLIC AGENDA		<input checked="" type="checkbox"/> PUBLIC		<input checked="" type="checkbox"/> PUBLIC		<input checked="" type="checkbox"/> PUBLIC		
	<input type="checkbox"/> PRIVATE		<input type="checkbox"/> PRIVATE INITIATIVE		<input type="checkbox"/> PRIVATE		<input type="checkbox"/> PRIVATE		<input type="checkbox"/> PRIVATE		
public schools											
DECISION-MAKING LADDER		COLLABORATIVE TOOLS									
M. PROCESS MANAGEMENT PLANNING, DEFINITION OF STAKEHOLDERS ROLES	<input type="checkbox"/> USERS DRIVEN	G. DATA GATHERING IDENTIFICATION NEEDS & PROBLEMS	<input type="checkbox"/> USERS DRIVEN	A. ANALYSIS STRATEGY DEFINITION: AMS, PRIORITIES, PROGRAM, INDICATORS	<input type="checkbox"/> SELF-MANAGED	D. DESIGN FROM PRELIMINARY STUDY TO CONSTRUCTION PLANS	<input type="checkbox"/> CO-DESIGN	E. EXECUTION CONSTRUCTION	<input type="checkbox"/> SELF-CONSTRUCTION	P. POST-OCCUPANCY AFTER BUILDING COMPLETION	
	<input type="checkbox"/> COLLABORATIVE		<input checked="" type="checkbox"/> COLLABORATIVE		<input checked="" type="checkbox"/> COLLABORATIVE		<input type="checkbox"/> Bespoke consensus		<input type="checkbox"/> USERS > PROFESS.		<input type="checkbox"/> USER TO TRANSFORM
	<input type="checkbox"/> PROFESS. > USERS		<input type="checkbox"/> PROFESSIONALS IN CONSULTATION		<input type="checkbox"/> PROFESSIONALS IN CONSULTATION		<input type="checkbox"/> Typological variations		<input type="checkbox"/> PROFESSIONALS + CONSULTATION		<input type="checkbox"/> USER TO OPERATE
	<input checked="" type="checkbox"/> PROFESSIONALS DRIVEN		<input type="checkbox"/> TECHNICIANS DRIVEN		<input type="checkbox"/> TECHNICIANS' ONLY DECISION		<input type="checkbox"/> Adaptable system		<input type="checkbox"/> TECHNICIANS' DESIGN		<input checked="" type="checkbox"/> USE/APPROPRIATION
M1.PLANNING	<input checked="" type="checkbox"/> G11 G1.ON-SITE DIAGNOSIS	A11 A1.SYNTHESIS	<input type="checkbox"/> D11 D1.CO-DESIGN	E1.NO-CONSTRUCTION	P1.ASSESSMENT & EVALUATION						
	<input checked="" type="checkbox"/> M21 M2.DECISION-MAKING		<input type="checkbox"/> A2.RESOURCES			<input checked="" type="checkbox"/> D23 D2.INDETERMINACY	<input type="checkbox"/> E2.REUSING (materials)	<input type="checkbox"/> External			
	<input type="checkbox"/> M3.ENGAGEMENT		<input checked="" type="checkbox"/> A31 A3.STRATEGY			<input type="checkbox"/> D3.LIMITED RESOURCES	<input type="checkbox"/> E3.CO-CONSTRUCTION	<input type="checkbox"/> Internal			
	S. STAKEHOLDERS IDENTIFICATION & REACHING		C. CARTOGRAPHIES DATA REPRESENTATION			A4.EVALUATION INDICATORS	D4.DODGING REGULATIONS	E4.CATALYSTS	P2.TECHNICAL.SUPPORT		
<input checked="" type="checkbox"/> S21 S2.REACH. BY SEDUCTION		<input type="checkbox"/> C15 C1.SPATIAL & MORPHOLOGICAL		<input type="checkbox"/> D5.RECLAIM (sites)	<input type="checkbox"/> Execute (indications)					<input type="checkbox"/> User accompaniment	
<input type="checkbox"/> S25		<input type="checkbox"/> C2.SOCIAL DIAGRAMS		USERS TO...	<input type="checkbox"/> Complete					<input type="checkbox"/> Building monitoring	
<input type="checkbox"/> S3.BY PROVOCATION		<input checked="" type="checkbox"/> C32 C3.THE INTANGIBLE			<input checked="" type="checkbox"/> E35 Assisted DIY-DIT					<input type="checkbox"/> P31 P3.KNOWLEDGE TRANSFERABILITY	
<input checked="" type="checkbox"/> S43 S4.BY MAKING VISIBLE											

W. WORKS | FACILITY



Plan of Serra Marina school playground.

- AMBIENT 1
- Equip de lectures i audició, para amb cadires, elements mòduls per desenvolupar el llenguatge i el càlcul.
 - Equip de relaxació i grupos, superfície de grups, cadires i estantes.
 - Equip de material: fustes d'Paulownia i canya natural.
 - Plant multifuncional artística: objectes musicals, miralls, barres, gresols i elements decoratius.
 - Equip d'orientació, segon els resultats de l'estructura.
- AMBIENT 2
- Equip de lectura i audició, para amb cadires i elements mòduls per desenvolupar el llenguatge i el càlcul.
 - Plant multifuncional artística: objectes musicals, miralls, barres, gresols i elements decoratius.
 - Equip d'orientació, segon els resultats de l'estructura.



Design guide 'Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective' (see "more information").

COLLABORATIVE TOOLS

time
↓

Municipality organises the process

As part of a municipal agenda of school playgrounds transformation with gender perspective.

M21
A31

Process management > Map of stakeholder roles + Analysis & Strategy > Strategic action plan

At the beginning of the process all participants were given the action plan, including the chronogram and phases description, actions, key moments, and stakeholders involved. The action plan defined roles and responsibilities of each of the stakeholders in the different phases.

S21
S43

Stakeholders > Direct invitation + Digital platforms

A call for applications to participate was launched through social media and the municipality website, and an informing session. A selection of schools was made according to published criteria. The municipality developed a specific website for Empatitzem project.

G11

Data gathering > Ethnographic observation

Direct observation allowed teachers and students to have a critical approach to the playground, its uses and relationships that take place, emphasizing inequalities and gender hierarchies.

G21

Data gathering > Diagnostic workshops

Developed with children in order to collect their perceptions and experiences in the playground, combining oral, written and graphic tools.

G22
G23

Data gathering > Meetings with stakeholders + Interview / survey

A self-critical questionnaire and further group interviews were developed to increase awareness of gender inequalities in school playgrounds. Regular meetings took place with the work group "Comissió de Seguiment" ("Monitoring Committee") formed by schools' direction, teachers, non-teaching staff, and families. Occasionally, also municipal technical staff was involved.

C15
C32

Projective cartography > Urban void + Collective perception

Problems and needs were identified through developing mappings with students of different ages of each school to share ideas, synthesise and locate spatially the outcomes of the analysis phase.

A11
S25

Analysis & Strategy > The (yellow) manifesto + Stakeholders > Provide a platform for expression

Strategic lines were exhibited in large panels exhibited in a visible location. During the synthesis phase and first proposals, some schools left the results of the diagnosis on display in a visible place so that spontaneous contributions could be made.

D11

Design > Co-design workshops

Collages, models and 1:1 mock-ups were developed to discuss the space transformation of the courtyard. Decisions were agreed among stakeholders.

D23

Design > Enabling: adaptable system

Mobile elements and floor enabled a temporal use of the sports courtyards of Serra de Marina school.

Professional construction

Most of the interventions were developed through professional construction.

E35

Execution > Collective assisted DIY-DIT

Design and execution of the collective mural painting in different schools, assisted by the artist Perriene Honoré.

P12

Post-occupancy > External evaluation: stakeholder review

Evaluation questionnaires on the process methods and activities during analysis and co-design. The decision-making process was evaluated by architects; see Saldaña Blasco, 2020.

P31

Post-occupancy > Manuals & toolkits

The methodology and design strategies were published in the guide '*Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective*' (see More information).

W16 COEDUCATIVE PLAYGROUNDS



Different moments of the analysis and design process.



Top: some executed interventions. Below: mural painting with the assistant of the artist Perrine Honoré (right picture by Clara Antón).

OUTCOMES

The coeducative playgrounds project successfully involved six schools in a process of co-diagnosis and co-design of outdoor facilities that aimed to improve the gender perspective balance and inclusivity in the use of space. The different activities organised by the architects enabled conversations with different stakeholders, including children, in the process. In this regard, it is important to underline the pedagogical impact of the process as an outcome in itself, in transmitting the project's values in children in two ways. On the one hand, it addresses the issue of the design of public space being developed by and for male-driven activities, a critique that entails the reading of public space as an inclusive space, thus avoiding the dominance of certain activities and user profiles. On the other, in terms of the process of decision-making, it increased children's perception of their rights and responsibilities in urban governance from an early age.

An internal review of the process was developed by architects and by Dafne Saldaña as part of her PhD research (Saldaña, 2020), concluding that the transformation produced a more equitable distribution of space, a greater diversity of play options and an improvement in habitability and comfort. However, the administration, as a procurement agency, commissioned neither a process review with users nor the monitoring of the use of the space. Despite the observation that the space seems to perform excellently, this issue raises the need to include a post-occupancy evaluation of the architect's intervention as part of the project commission. This could have been developed through an ethnographic observation of the way the space performed before and after the intervention, as well as interviews with participants concerning the use of the space and their perception of it. The lack of these documents can be seen as a missed opportunity, the learnings from which could have been incorporated in further projects, that potentially could have encouraged other schools to replicate the transformation of the playground. In this regard, the publication of the process in the form of a toolkit was a relevant contribution to the improvement and replicability of the system.

More information:

Arqbag, Vilajoana, A. and Cerri, S. *L'Escola Expandida. Repensem els Espais d'Aprenentatge*. Barcelona: Pol·len Edicions.

Equal Saree (2017) *Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective*. Barcelona: online publication available in multiple languages at www.equalsaree.org.

Saldaña Blasco, D., Goula Mejón, J., Cardona Tamayo, H. and Amat García, C. (2019). *El Pati De L'escola En Igualtat: Guia De Diagnosi i D'intervenció Amb Perspectiva De Gènere*. Barcelona: Pol·len Edicions.

Saldaña Blasco, D. (2020) *El Espacio como agente coeducador*. PhD thesis. Universitat Politècnica de Catalunya, pp.262 and 264. Available at: www.tesisenred.net.

www.equalsaree.org/project/empatitzem

www.gramenet.cat/ajuntament/arees-municipals/educacio/projectes-educatius/empatitzem

Images: courtesy of Equal Saree.

STAKEHOLDERS

Civic engagement	Inhabitants of Bocachica Village
Public administration	Colombian Ministre of Culture
Community architects	Local universities: U. Tadeo, U. Pereira, Pei.Lab and Nuevos Territorios Universidad Javeriana de Bogotá. Spanish Collectives Arquitectos de Cabecera and Zuloark

CONTEXT & AIMS

This project responded to an invitation from the Colombian Ministry of Culture and Heritage to Colombian schools of architecture to prepare a design for a historic colonial fortress to host the closing event of their National Heritage Conference in 2016. In turn, the local architecture schools invited Spanish architects' collectives to participate. The constraints were its nearly zero budget and the restriction on making any permanent intervention – even one as small as a nail – to the listed fortress. The contradictions at the site were obvious from the beginning: the fortress was close to Bocachica, a town of 10,000 inhabitants who felt alienated from the military building, who live in informal housing settlements where streets have neither pavements nor lighting. Surprisingly, a gas infrastructure was under construction in a village that had no gas household appliances and no public water supply infrastructure (water was supplied by tank trucks). It turned out that, through public subsidies, investors were preparing to develop the area for tourism. In other words, the planned interventions did not take account of the needs of the actual inhabitants of Bocachica, or offer any benefit to them.

The temporary appropriation of the fortress for the event became an excuse to demonstrate local social demands and attempt a long-term impact. The short-term strategic aim was to change the Bocachica citizens' perception of the fortress as an institutional military government building to one of a local facility hosting cultural events. The physical utilisation of the space had three strategies: to domesticate an uncanny space by turning it into a living room using broken furniture which was provided by the locals as a barter for mending it; to protect the area from the strong sun with shade, using cables and umbrellas; and to buy some trees with the limited available budget to provide shade in the future for a social meeting place .

The long-term strategy consisted of connecting a disused fortress, the national heritage institution that manages it and the Escuela Taller Cartagena de Indias, which runs the Taller de Carpintería de Ribera (Boat-building Carpentry Workshop). Escuela Taller has been organising training workshops in the fortress since 2016 as part of the adoption of traditional Caribbean wood construction for boats, houses and furniture.



Contrasting situation between a historical military fortress (left) and the neighbouring fishermen village of Bo-cachica (right).

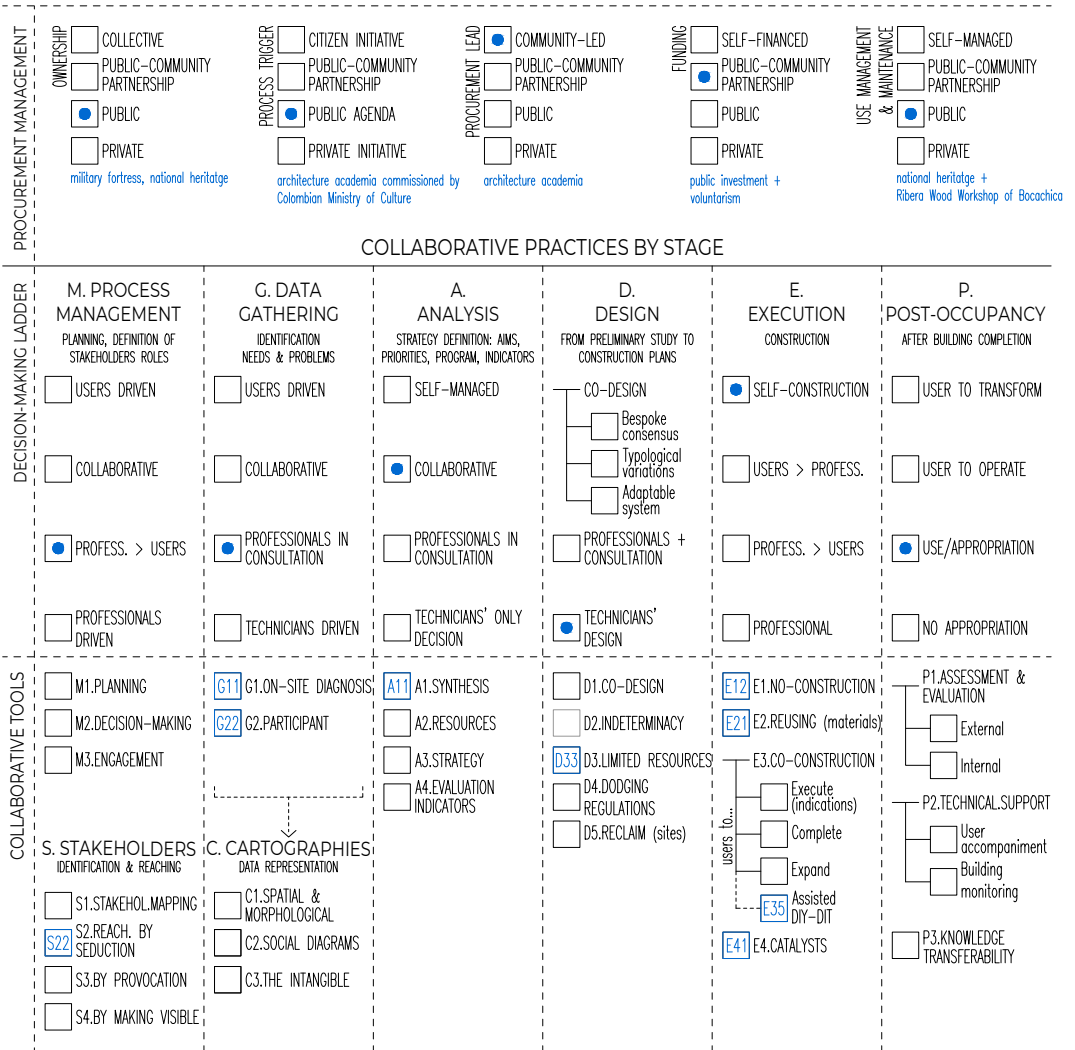


Reaching local villagers was achieved through organising activities with the primary school.



Construction with low-tech and furniture refurbishment.

BOCACHICA



ATLAS DE PATRIMONIO EMERGENTE EN BOCACHICA

- GRUPO 3- CONTEXTO E HISTORIA
- GRUPO 2- APROPIACIÓN E IDENTIDAD
- GRUPO 6 -FUERTE
 - PATRIMONIO MATERIAL
 - PATRIMONIO INMATERIAL (CULTURA-GASTRONOMÍA-RELIGIÓN)
- GRUPO 8 -EQUIPAMIENTOS E INFRAESTRUCTURA/SERVICIOS
- GRUPO 4- MOVILIDAD (INTERNA Y EXTERNA)
- GRUPO 6- DESARROLLO TERRITORIAL (URBANISMO INFORMAL Y PLANIFICADO)
- GRUPO 4- ECONOMÍAS (TURISMO, ARTES Y OFICIOS)
- GRUPO 2- INTELIGENCIAS COLECTIVAS Y PERSONAJES
- GRUPO 1 -MORFOLOGÍA, TIPOLOGÍAS DE VIVIENDA Y CONSTRUCCIÓN
- GRUPO 5- PRÁXIS DE CABECERA (ANÁLISIS DE MODOS DE HABITAR)
- GRUPO 3 - PROBLEMA AMBIENTAL -SOMBRA Y ARBORIZACIÓN
- GRUPO 1 - ACTIVIDADES-TALLERES-PARLAMENTO
- GRUPO 7- MICROPOLÍTICAS (ASOCIACIONES, ORGANIZACIONES, COOPERATIVAS, FUNDACIONES...)
- GRUPO 8 - POLÍTICAS DEL AGUA
- GRUPO 7 -ECOESTÉTICAS
- GRUPO 5 - ECOSOCIAL (TEMA DE LAS BASURAS)

The Bocachica Manifesto organised work groups to address local problems.

COLLABORATIVE TOOLS

Invitation as part of public agendas

The Colombian Ministry of Culture and Heritage commissioned local schools of architecture to prepare a colonial fortress to host the closing event of the National Heritage Conference.

S22

Stakeholders > Indirect contact

Local people were reluctant to get involved in a participatory diagnostic phase. Reaching adults was achieved through firstly organizing workshops with children of the primary school

**G11
G22**

Data gathering > Ethnographic observation + Meetings with stakeholders

Ethnographic observation and meetings with stakeholders allowed to recognise the problem of water infrastructure and the opportunity of the event to make visible local claims.

E21

Execution > Borrow - barter

Broken furniture was borrowed from neighbours in exchange of returning it fixed once the event concluded. Participation in the restoration furniture workshop raised interest in the event.

D33

Design > Designing for low-risk construction

Given the listed category of the fortress that precluded hanging a single nail and the aim to involve locals, a low-tech construction method was chosen, which allowed children to co-construct.

E35

Execution > Collective assisted DIY-DIT

The conditioning of the fortress for the event was executed by workshop participants (students and tutors of schools of architecture) and local children.

A11

Analysis & Strategy > The (yellow) manifesto

Resulting from the conference, la Carta de Bocachica (The Bocachica Manifesto), became a roadmap agreed by institutions and locals to foster a socially, politically and economic sustainable development of the region.

**E41
E12**

Execution > Generative action + Do not do (II): connect

The event became a catalysing action to connect the national heritage institution who manages an obsolete fortress and Escuela Taller Cartagena de Indias. The result was that the later organises carpentry workshops in the fortress since 2016.



Furniture repairation in the fortress (left) and in the village under a tree (right). In Cartagena de Indias, shadows become crucial urban elements for gathering and socialization.

W17 BOCACHICA



W. WORKS | FACILITY

Pictures from the final event of the National Heritage Conference in the fortress, with repaired furniture. In the top image: "Bocachica without water, without assistance, with gas", in the tripods that protected the trees that were to be planted in the village for future shadows.

OUTCOMES

The success of the Bocachica project exceeded all expectations. On the day of the event national authorities and local people gathered, traditional events took place and the official speeches were followed by the Bocachica Charter, which stated locals' demands and enabled the creation of working groups.

During the preparation for the event, the different strategies to overcome the initial limitations were successful. An example of this was the overcoming of the reticence of the adult community and reaching them through children. Another example was to involve locals in the preparation for the event, including the construction phase, and to borrow broken furniture to encourage locals to attend the event. Most importantly, the instrumentalisation of a singular event – the closing event of the National Heritage Conference – to make visible local demands about the unequal development of Bocachica village, and the need to develop a long-term plan, translated into the Bocachica charter.

On the other hand, and as a result of the workshop, the Carpinteria de Ribera (Ribera Carpentry Workshop) has been organising training in the construction of models and the restoration and building of traditional boats which were used to connect the island with the city of Cartagena, transporting people and goods. This has changed the use and understanding of the building from an disused military building to a local facility, in the perception of both local people and the municipal administration, and is having a positive impact on the social and economic network of Bocachica village.



Boat building carpentry workshops organised in the fortress by Escuela Taller Cartagena de Indias, ongoing since 2016.

More information:

www.arquitectosdecabecera.org/AC/en/portfolio/bocachica

Images: courtesy of Arquitectos de Cabecera.

STAKEHOLDERS

Civic engagement	Group of teenage skaters
Public administration	Municipality of Arbúcies
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Idensitat art project
Private	Voluntary collaboration of a private local construction company

500 m², 40.000€

CONTEXT & AIMS

The SK8+U project consisted of the construction of a skate park with a tight budget in Arbúcies, Catalonia, led by its future users – a group of teenage skateboarders. In the spring of 2011, the potential skate park users contacted political parties during the election campaign period, as well as local residents and members of the Straddle3 architecture practice. They aimed to build facilities for skateboarding and other sporting activities such as scooter-riding and BMX cycling, a sport that is often played with passion and functions as a signifier of identity. This initiative was approved by the municipality, which offered the land and allowed users to take the lead in the process. SK8+U won the 2012 iD Sport award [Sport, Art and Social Inclusion], promoted by IDENSITAT and the national Consejo Superior de Deportes (Sports Council), which granted some funding for the project.

The project was carried out through a radical participatory process, which combined different creative disciplines, materials recycling and diverse collaborative dynamics. It involved future users, especially the youngest, in the possibility of urban transformation and the maintenance of spaces through the means of collaborative design, shared management, social communication and a self-build approach.

The project made the most of the input of the stakeholders involved, as well as becoming an exercise in the optimisation of resources and processes. The project was the result of adapting the programme proposed by the skateboarders to the specific site conditions, reusing surplus material and with little budget allocation. The construction work was carried out through a combination of self-build workshops, carried out with people with different levels of experience, and interventions by professionals and experts. One of the main points of the proposal was the use of second-hand materials, such as a shipping container bought for the price of scrap. The container served several purposes simultaneously: support for the earthworks and ramps, living accommodation, warehousing, facilities for workshops and/or social activities. In addition, prefabricated concrete, wooden frames and various metal elements were used in order to save costs.

— Information from Straddle3 website, adapted by the author.

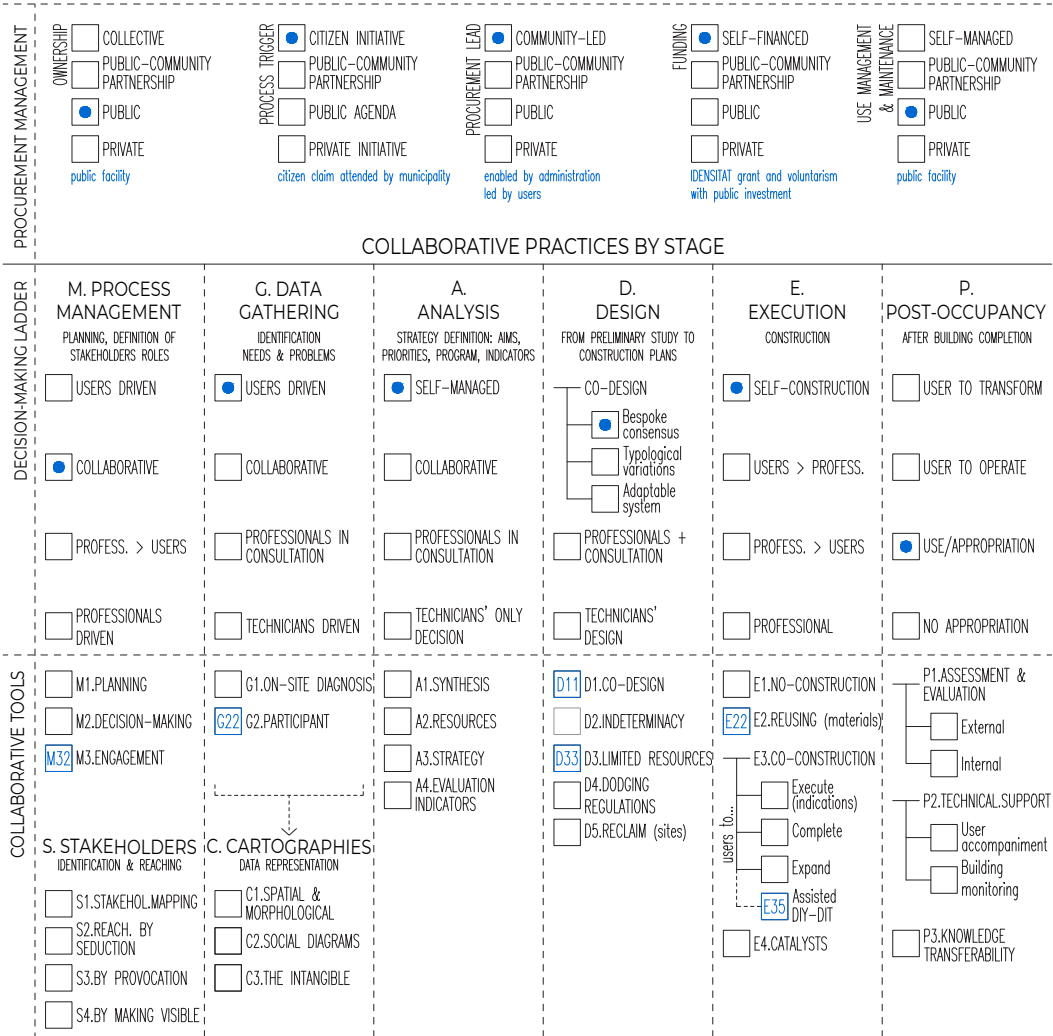


Areal view of the area.



Sk8+U as finished.

SK8+U ARBÚCIES



COLLABORATIVE TOOLS

M32

Process management > Involving decisive partners

Administration responded to the demand with a public plot and allowing users to develop the project.

G22

Data gathering > Meetings with stakeholders

Meetings between different users and the municipality allowed to reach an agreement for the development of the project.

A21

Analysis & Strategy > Financial analysis & co-finance strategies

The project was financed with an external award, the 2012 iD Sport Award [Sport, Art and Social Inclusion], promoted by IDENSITAT and the Consejo Superior de Deportes (Sports Council).

**D11
D33**

Design > Co-design workshops + Designing for low-risk construction

Design was agreed between users, technical staff and the municipality. Low-risk construction methods were considered from the early beginning.

E22

Execution > Recycling & reclaiming components

Construction materials arrived as leftovers from the construction of the Eix Transversal road.

E35

Execution > Collective assisted DIY-DIT

Users executed construction works assisted by technical and professional staff.



Left: "The intention [to build the skatepark] is double, both of municipality and yours. So let's do it together (...). That's why we need an agreement." Pere Garriga, Mayor of Arbúcies (centre table), in the meeting with users and technical staff.

Screenshot from https://youtu.be/ux1mR_gFPcU. Right: Co-design process.



Co-construction stage.

W18

SK8+U ARBÚCIES



Co-construction stage.

OUTCOMES

The project became very successful in terms of both process and result and engaged the local population, which included the architect. The role of the municipality in providing the land and enabling users to take the lead became crucial. However, this was only possible through the great effort of users and technicians, the volunteering of skills by a local construction company and the donation of materials.

The process was developed rapidly, for external reasons. On a positive note, short processes prevent the participants becoming exhausted or losing interest, as acknowledged by the architect David Juarez in conversation. Since relying on volunteers may not be sustainable for developing the project if too much effort is required from participants, it may need to look for formulas that include a larger proportion of municipal support or financial mechanisms (see la Santa (W19) and Workers' Movement Square (W20) case studies). This situation raised questions about the co-responsibility of public provision of facilities in terms of budgeting, leadership, and dedication.

Despite their youth, the involvement by users was consistent at all the stages of decision-making, including the initial demands, co-design, and co-construction. Some elements, such as the central pyramid (a skateboarding obstacle) was not something the architects wanted in the design, but it was eventually built, as users considered it a fundamental element of the space. Sk8+U became a very well-frequented space; users' involvement in its procurement translated into an emotional attachment to, and care for, the space.



Sk8+U as finished. Note that the ramp is placed on the side of the shipping container.

More information:

www.straddle3.net/en/proyectos/sk8u

www.vimeo.com/52870814

www.youtube.be/ux1mR_gFPcU

Images: courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	Collective of young skaters
Public administration	Municipality of Santa Coloma de Gramenet
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Lur Paisajistak and Lea Atelier (landscape)
3.000 m ² , 190.000€	

CONTEXT & AIMS

"Is there a better expert than the user?"

La Santa skate park design involved the design and construction of a sports area in Santa Coloma de Gramenet, in the metropolitan area of Barcelona. A group of skateboarders in their twenties were lobbying both for a larger skateboarding facility, as the one built in 2007 was proving inadequate after a decade, and to be included in the design process. The municipality responded by offering a nearby plot of land and municipal resources and allowing the users and a team of technicians to lead the process, consisting of the architectural practice Straddle3, the skate park designer Sergi Arenas and the landscape team Lur Paisajistak. The co-design process included bi-weekly workshop sessions. These sessions established a framework of priorities that led to a planned range of uses for the park, which had to be resolved in different phases, due to budget constraints. The project that resulted from the "participatory process" included a pedestrian area, a skate park, an outdoor gym, a bike park, as well as an area dedicated to car parking. The first phase included the new pedestrian area and a multipurpose skate park, suitable for use by people playing various urban sports. In meetings with the municipal staff involved, the methodology went well beyond the original expectations of the project and the concept of citizen participation: from the development of the planned use and design to the construction of the park itself. This situation established a mixed dynamic between infrastructural works and basic urbanisation to be carried out by a contractor, and another set of projects to be developed by the management team and future users in the form of self-build workshops. These included both skateboarding facilities as well as gardening and replanting specimens from nearby unused plots of land. Reclaimed material included building materials and plants from abandoned areas - what Gilles Clement calls "the Third Landscape". One of the main conditioning factors of the project is the practice of self-building, together with the use of recycled materials. This can be found, on the one hand, in the skateboarding area with the use of metal profiles and in the prefabricated concrete obstacles. On the other, it can be seen in the pedestrian area where the benches are made of old counterweights of concrete, the islands are decorated with laminated bamboo (recovered from temporary installations) and the pergola-lamppost was built reusing former traffic lights.

— Information from the architects' website, adapted by the author.

COLLABORATIVE TOOLS

**M32
D51**

Process management > Involving decisive partners + Design > Reclaiming empty plots

The existing skatepark proved too small; a nearby unused piece of land next to sports facilities was reclaimed by a group of teenager skaters. Administration responded to the demand with a public plot and municipal assistance, for example in the hiring of technical staff and construction company. However, it allowed users to lead the process.

**S42
S43**

Stakeholders > Printed media + Digital platforms

A public campaign to reach a broader audience included printed and digital media, including the website (www.sk8sc.net, discontinued) and social networks.

**G12
G22**

Data gathering > Group walk + Meetings with stakeholders

Site visits with users and meetings with stakeholders allowed to identify areas where the project could be developed, and their intended uses.

C35

Projective cartography > Memory

Graphic designer Carla Boserman developed relatograms in which the process was explained. See www.carlaboserman.net.

A23

Analysis & Strategy > Available resources (II): "harvest map"

The lack of resources induced searching for materials to be reused both for construction and gardening in unused plots.

D11

Design > Co-design workshops

Co-design workshops took place bi-weekly in order to establish the plan of uses and design of elements for the park, as well as to define priorities.

D34

Design > Split large interventions

The lack of funding did not allow to intervene in the 8.000 m² of the plot. The masterplan was split and a first intervention of 3.000 m² was developed.

Construction through public tendering

The construction of the elements below ground level 0 was developed by a professional company through public tendering.

**E32
E35**

Execution > User to execute + Collective assisted DIY-DIT

In parallel, all the elements above level 0 were built by users with the assistance of technical staff, in a "do-it-together" process.

E22

Execution > Recycling & reclaiming components

The pergola was built recycling traffic light posts and metal construction fences. The structure was prepared in a workshop and placed on site by users.



1. prefabricados de hormigón
new jerseys and bordillos de hormigón usados, provenientes de obras realizadas previamente en el municipio.
2. contrapesos de hormigón
contrapesos de hormigón armado que originalmente construimos como anclaje de la estructura Har Eves.
3. báculos de semáforo
postes de semáforo obsoletos encontrados en el almacén municipal de Santa Coloma de Gramenet.
4. chapa perforada
chapa ondulada perforada que hemos desmontado de la valla que limita el solar, al convertirla en barandilla.
5. perfiles metálicos
varios perfiles metálicos procedentes de las instalaciones efimeras del programa Re-Set / Tricentenari.
6. entramado metálico
entramado metálico o religa proveniente de un derribo.
7. tablas de madera de pino
tablas de madera de pino procedentes de las instalaciones efimeras del programa Re-Set / Tricentenari.
8. piezas de bambú laminado
piezas en cruz de bambú, procedentes de las instalaciones efimeras del programa Re-Set / Tricentenari.
9. áridos reciclados
zahorra y fresado de asfalto provenientes de derribos y obras de urbanización en Santa Coloma de Gramenet.
10. tronco de árbol muerto
tronco de árbol recogido en las inmediaciones del parque de Can Zam.



Harvesting materials.

"Harvest map".

W19 LA SANTA URBAN SPORTS PARK



Co-design workshop.



Gardening workshops.



Co-construction.



W. WORKS | PUBLIC SPACE

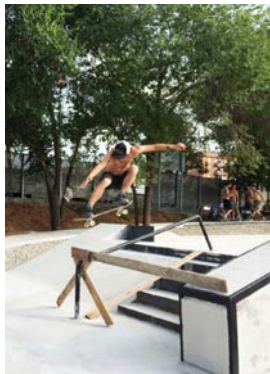


Pergola in workshops (professional construction) and on-site installation.

OUTCOMES

La Santa, an urban sports park, represents an intermediate situation in terms of complexity and involved stakeholders from Arbúcies skatepark (W18) and Workers' Movement Square (Plaça del Moviment Obrer) in Barcelona. The project was successfully achieved through its dual context: this was, on the one hand, the social requirements of a group of young skateboarders in their twenties, while on the other it was the enabling response of the municipality which did not maintain control of the process. Thus, the administration crucially allowed users to take responsibility and provided the necessary means for its realisation. In this regard, the architect David Juarez emphasises that the result could only have been achieved with the strong commitment of participants in all the phases, including design and construction. The construction made the most of two construction logics: professional construction for the elements below ground, while those above ground relied on users.

The design was open to users' input: for example, in the case of the pergola, which exemplifies the construction logic of the whole process: the structure was professionally manufactured in a workshop and the installation relied on users; both elements were recycled materials: traffic-light posts and construction site fences.



Top: pictures of the opening day. Below: project as finished.

[More information:](http://www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina)

www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina

Images courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	Neighbours of the district, specially the neighbourhood of la Marina La Marina Patina (skate collective)
Public administration	Technical staff of Pla de Barris, Foment de Ciutat SA, and district. BIMSA (municipal construction developer).
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Lur Paisajistak and Lea Atelier (landscape)
6.000 m ² , 1.0000.000€	

CONTEXT & AIMS

"Can neighbours improve a Pritzker prize design?"

Moviment Obrer Square entailed the rethinking and redesign of a recently built public space, designed by Toyo Ito Associates and Óscar Tusquets, that was never heavily used, to incorporate a social demand that emerged from the consultation process of Pla de Barris (Neighbourhood Plan) to build a skateboarding area.

For this purpose, a roadmap, a participatory methodology and the drafting of a preliminary project were proposed. These would involve the neighbourhood, specifically the skateboarding collective La Marina Patina, in the development of a project to boost the area. The intervention included events in the neighbourhood that combined dissemination, participation and sports, and involved recycling the spiral motifs and eye-shaped outlines used in the original design by Ito and Tusquets.

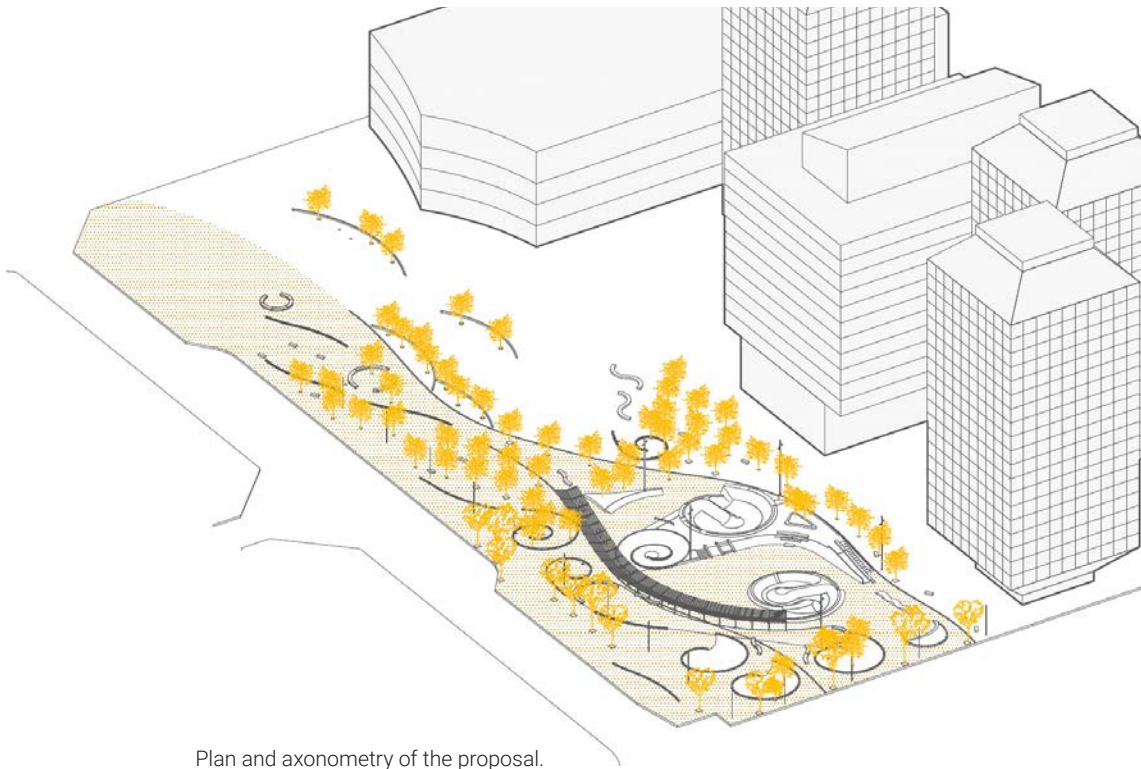
The strategy took into account the need to maintain close collaboration between the existing associations in the region and the different municipal entities. To do so, during the initial phase of the process multiple dissemination activities were carried out, including visits to secondary schools in the neighbourhood and the municipal market square. At each event, a skateboarding exhibition was held to make the process visible and to encourage potential participants.

In four workshop sessions with residents, a blueprint was created to define three differentiated spaces for the square: an area for intensive use and skateboarding, an unobstructed space for beginners, and an area for general use, presided over by a large pergola and surrounded by a restored group of trees. The design that was proposed is based on the conservation, transformation and interpretation of the existing traces of the previous approach to the public space, avoiding the unnecessary introduction of new design forms.

— Information from the architects' website, adapted by the author.



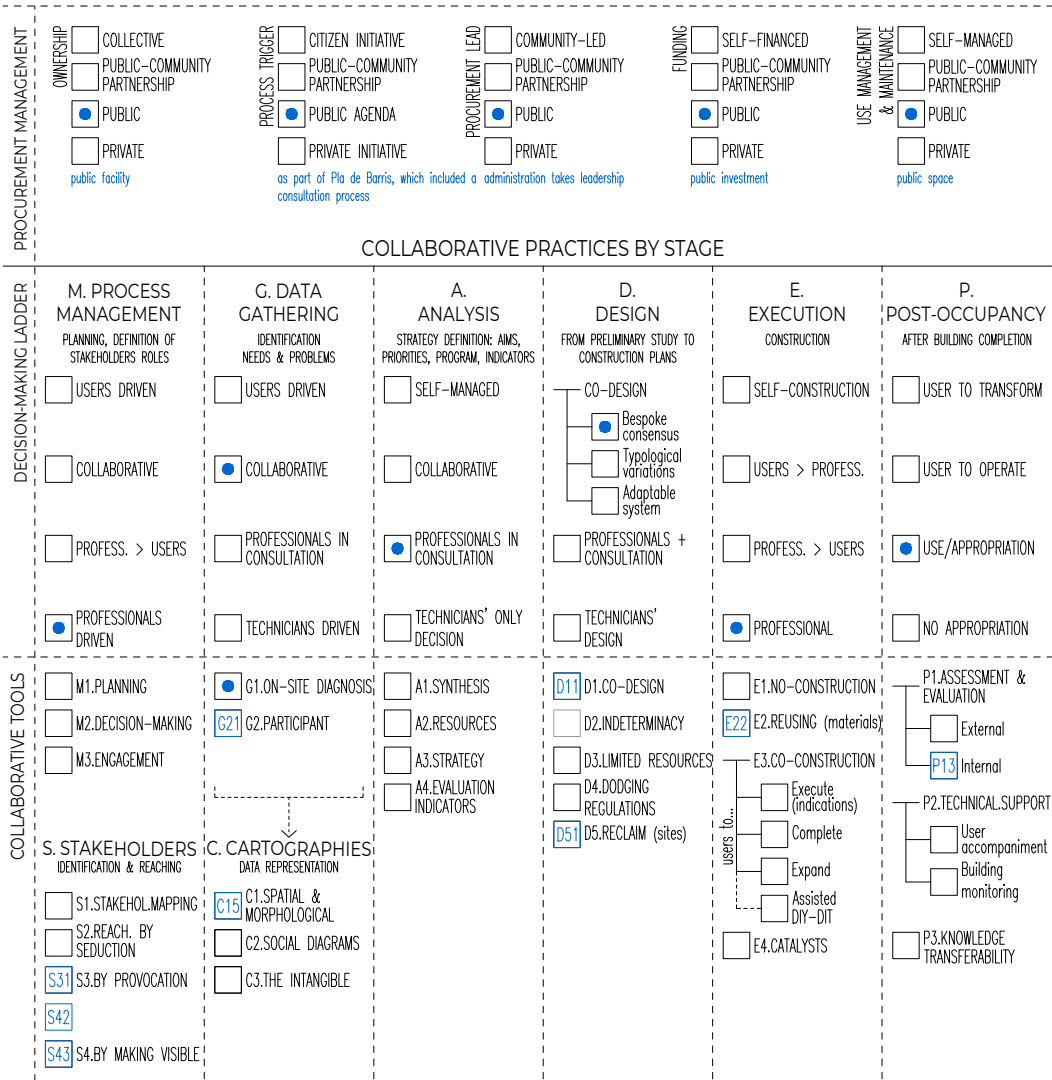
Plan and analysis of existing area as designed by Toyo Ito and Oscar Tusquets.



Plan and axonometry of the proposal.

W20 MOVIMENT OBRER SQUARE

WORKERS MOVEMENT SQUARE



W. WORKS | PUBLIC SPACE



Artifact invades public space: on-site tactical and temporary intervention to make the project visible.

COLLABORATIVE TOOLS

D51

Design > Reclaiming empty plots

The area had been executed a decade before. Neighbours claimed both a skating facility as well as an improvement of the design of the area, a claim that was incorporated in the Neighbourhood Plan.

Administration management

The project was led by the administration, who invited the architects to design the project along with neighbours. Unlike Arbúcies and la Santa, this process was conducted by public administration.

S42
S43

Stakeholders > Printed media + Digital platforms

Reaching stakeholders through different platforms: website, printed media, digital platforms. In addition, some informative sessions took place in local schools.

S31

Stakeholders > Artefacts invade public space

A skate ramp was installed in Marina square. This tactical action was located in a nearby populated square, rather than on the site of the future skatepark, which had little activity at that time.

G21

Data gathering > Diagnostic workshops

The first of the four workshops consisted in an explanation of the process, and interviews and questionnaires to determine the profile of users and disciplines: scooter, skate and rollers. Rather than "advanced" young skaters, most users belonged to families and different ages.

C15

Projective cartography > Urban void

The existing space was analysed in terms of circulations, geometry and uses. Both circulations and geometry were incorporated to the new design.

D11

Design > Co-design workshops

Three co-design workshops took place, each of them with 20-30 participants. Sessions started in the square and then continued in a nearby public facility. The first session was dedicated to general proposals, which were discussed in more detail in the second one. Architects matched users' proposals with the preexisting design of Toyo Ito with curve geometries. In the last workshop session, minor adjustments were double-checked before the design of construction plans.

Construction through public tendering

The execution of the project was developed through standard mechanisms of public tendering.

E22

Execution > Recycling & reclaiming components

A report on the co-design and co-construction process for a urban skatepark is available at: www.straddle3.net/en/proyectos/skatepark-en-el-barrío-de-la-marina

P13

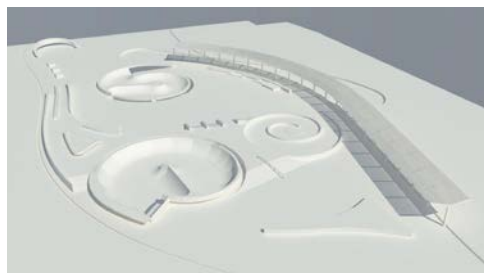
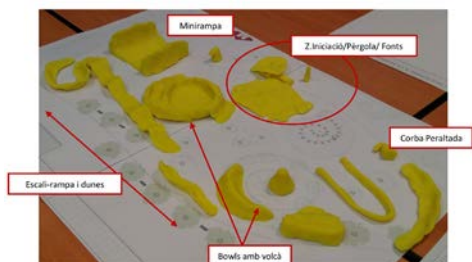
Post-occupancy > Internal evaluation: tools & methods

An internal evaluation was performed as part of Pla de Barris (Neighbourhood Plan), developed by the administration.



Co-design workshops with users.

W20 MOVIMENT OBRER SQUARE



The use of plasticine in co-design workshops enabled communication between technical staff and users, as well as allowed to represent complex geometries. Co-design workshop outcomes were simulated with a virtual model.



W. WORKS | PUBLIC SPACE

The square as finished.

OUTCOMES

After Sk8+U (W18, 500 m², 40.000€) and la Santa (W19, 3000m²,190.000€), Workers' Movement Square (Plaça del Moviment Obrer, 6.000 m², 1.0000.000€) exemplifies the scalability of a process in terms of both budget and size. Like the two experiences above, Workers' Movement Square started with a social demand noted by the municipal administration: in this case it was incorporated into the Pla de Barris (Neighbourhood Plan). However, unlike Sk8+U and la Santa, the size of the project and its status as part of municipal development plans entailed public management of the process and the intervention of many different municipal departments. Design workshops enabled effective communication between professionals and users. In this regard, the use of an unusual material for architecture models, plasticine, became an easy tool for communication between professionals and users to represent complex geometries. Emphasis was placed on the understanding of different users' profiles, mostly families and amateurs, and different kinds of activities with distinct requirements: scooters, skateboards and roller skates need different kinds of slope and sizes of obstacle. Concerning the design process, the architect David Juarez from Straddle3 acknowledges they expected more people in the sessions. The tactical action of building a temporary skate park in Marina Square became an effective instrument to make the process visible. During discussions, certain elements of the construction were directly proposed by residents in the co-design workshops: for example, the pergola, which substituted trees for the preferred option of the architects. The architects recognised the positive impact of users as design informants, including the proposal of the pergola as an improvement to the original design. At the end of the process, a group of "advanced" young skateboarders who use other spaces of the city showed up, claiming they had been excluded from the process as the media campaign had been limited to the immediate neighbourhood. A session was organised to offer explanations by the design team, including both the architects and the renowned skate park designer Sergi Arenas,. Despite the fact that the meeting convinced the critical audience, this event raised a major question about the boundaries of participation. The publicity campaign had focused on a small-scale context, the neighbourhood. In addition, as Juarez explains, the presence of advanced skateboarders in the co-design workshops would have made the process more complex, since the needs of other demographic user profiles (less experienced skateboarders, families, children) would potentially have been overridden. Juarez emphasises the importance of the participation of users with different sensibilities, including their sporting activity and leisure preferences, for technical decisions about skating ramps, bowls and obstacles. People's engagement during the process translated into a feeling of belonging and care for the space. In terms of use and attendance, the area shifted from a surplus space into an area with a high intensity of use by different kinds of users.

More information:

The report of the co-design process is available in Straddle3 website: www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina
Images: courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	Students of the public school Torre Balldovina, users of the square: children and adults of the neighbourhood
Public administration	Municipality of Santa Coloma de Gramenet, Àrea Metropolitana de Barcelona (AMB)
Community architects	Equal Saree (Helena Cardona Tamayo, Julia Goula Mejón and Dafne Saldaña Blasco)

CONTEXT & AIMS

Plaça d'en Baró square, near the José Berruezo Silvente Garden, in the municipality of Santa Coloma de Gramenet, in the metropolitan area of Barcelona, is a co-created urban refurbishment that aimed to transform a space for new activities for children aged from six to twelve. The project highlights the importance of a transversal collaboration between the different areas of the City Council (Urbanism, Education and Equality) and the institutionalisation of citizen participation as a key tool of municipal public policies.

The process included the participation of girls and boys in the municipality of Santa Coloma de Gramenet, but it also included the perspective of other users, caregivers and the elderly. Workshops for collective reimagining of the uses that the space could host aimed to discuss design criteria to allow a diverse range of users to coexist in the space. Two workshops took place in the square (three hours each, 52 participants in total) and three more were developed at Escola Torre Balldovina, a state school in the neighbourhood (1.5 hours each). These workshops allowed the architects to analyse the existing uses of the square, discuss people's needs and desires, and imagine potential new uses. A plan of the ways the square could be used was developed in this first workshop phase.

The second set of co-design workshops took place with students at Escola Torre Balldovina, in the age group targeted as potential users in the project brief. Workshops with the school were framed by the initial sessions that had taken place in the square on site, and were directed towards the definition of a specific materiality and the design of specific elements. In the case of the school workshops, the methodology of a (co)Educating City recognizes children as active decision-making agents in everyday environments, where the design of public space is an element of paramount importance.

The project was executed during 2019.

— Information received from architects, translated and adapted by the author.

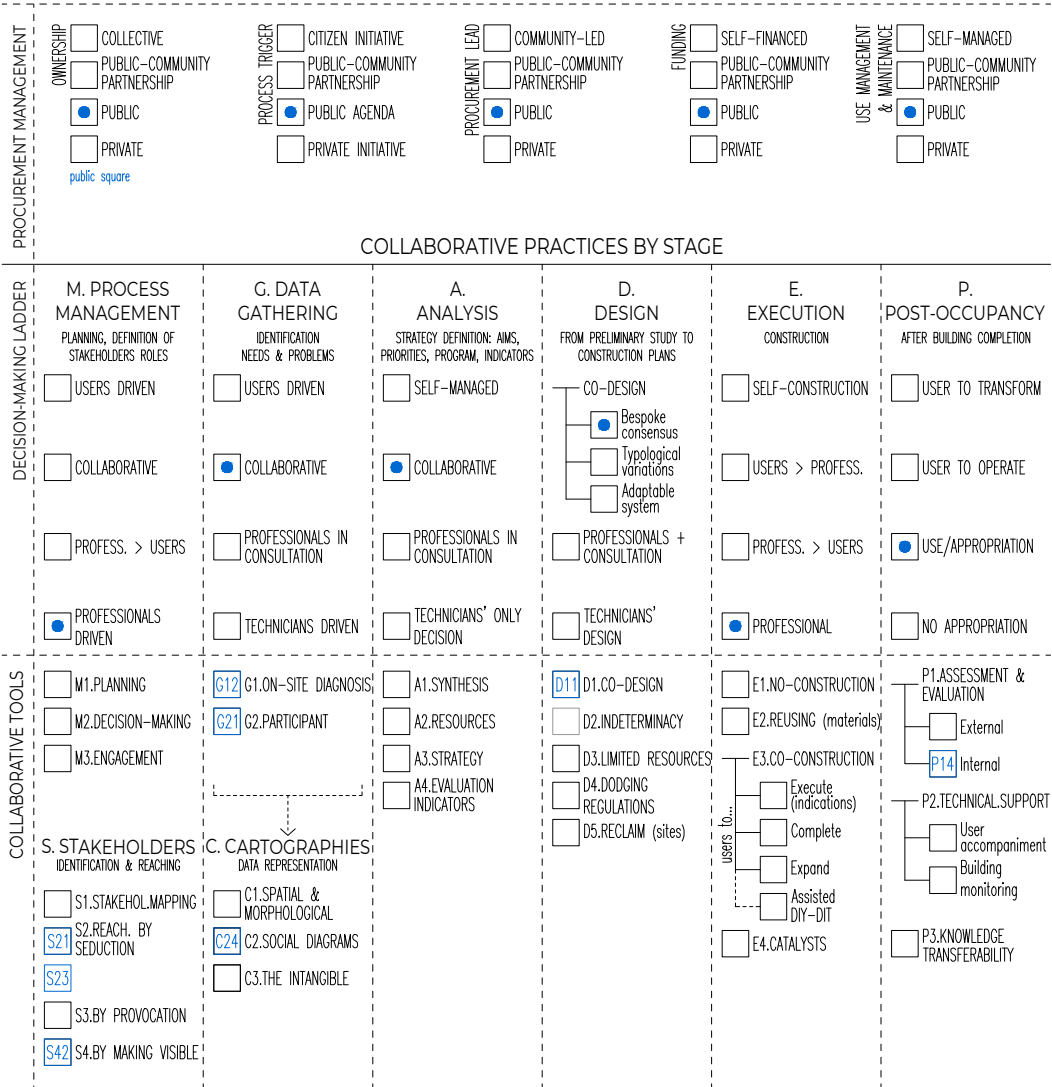


As built and workshop (below), pictures by Conchi Berenguer.



W21 BARÓ SQUARE

BARO SQUARE



COLLABORATIVE TOOLS

Design commission as part of public agenda

The municipality invited the architects to develop the project of the square, as part of a municipal agenda of public space improvement with gender perspective.

S21
S42

Stakeholders > Direct invitation + Printed media

The invitation to Torre Balldovina school was done through the administration of the school. Posters were pinned in the neighbourhood.

G12
G21

Data gathering > Group walk + Diagnostic workshops

On-site neighbourhood workshops with children and families were done, for collective diagnosis of well-being, discomfort, and needs, and discussions of guidelines for the future uses of the square.

S23

Stakeholders > Make it fun

Participatory activities in the square were displayed as children games to encourage kids' participation. Snacks were offered in order to conclude with a social and leisure activity.

C24

Projective cartography > Users' needs (II): collective

Workshops allowed to identify and prioritise the needs of children as a collective (and their families), and their wishes for the transformation of the square, considering diversity.

D11

Design > Co-design workshops

Collective proposals for the transformation were developed with axonometries mixing drawings and collages.

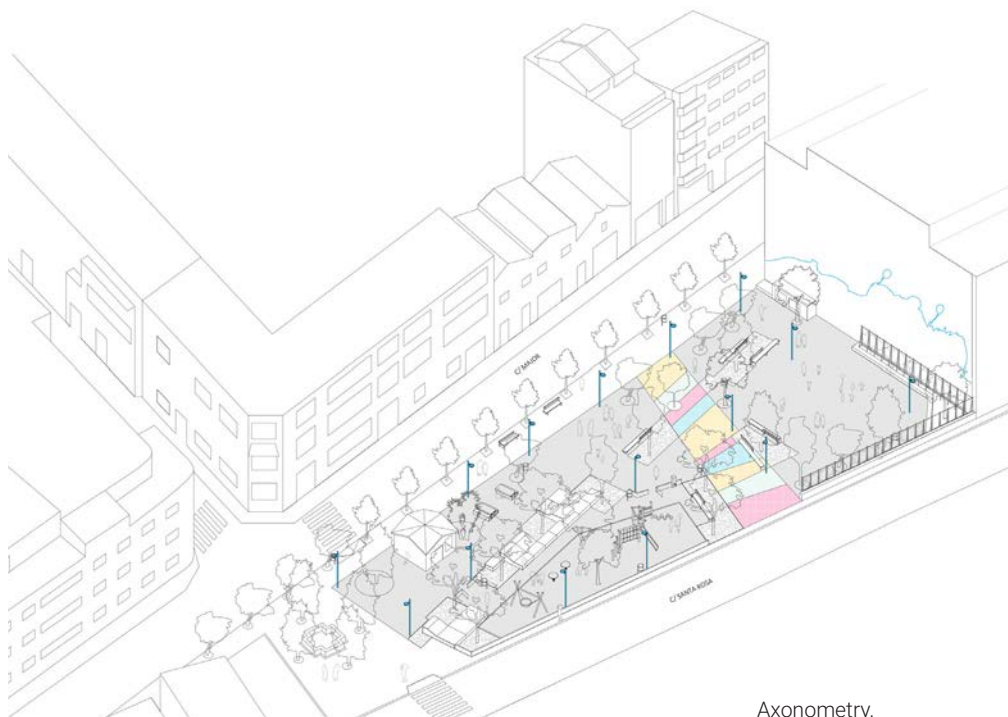
Professional construction

Through public tendering competition.

P14

Post-occupancy > Evaluation indicators review

Evaluation indicators were defined a posteriori in order to evaluate the performance of the square a year after its transformation through ethnographic observation.



Axonometry.

W21 BARÓ SQUARE



First phase of workshops in the square.



Co-design workshops with students of Torre Balldovina public primary school.

OUTCOMES

The transformation of Baró square was evidence of an efficient way of including users in decision-making in public space, in terms of both the methods used and the selection of participants, in relation to mixing on-site users with the profile of intended users at the local primary school. For the Equal Saree project an interesting balance was proposed between open and directed activity in Baró Square [W21], that aimed to respond to both users of the square, in the first set of workshops, and the social group targeted as specific users by the municipality's commission – children aged six to twelve – in a second phase developed in the nearby Torre Balldovina primary school, whose community agreed to participate. According to the architects, “the square has been conceived as an entirely playful space, encouraging free, inclusive and diverse activities and generating comfortable living spaces, with access to nature, that improve the daily life of the residents. The resulting design is a permeable and open square in the neighbourhood, with a variety of spaces and possibilities to meet the needs of different users, comfortable spaces and elements that respond to the collaborative design process of Baró square with the girls and boys in the neighbourhood” (from the account received from Equal Saree). An internal review process was developed by the architects. However, neither a review with users, nor the monitoring of the use of the space, was commissioned by the municipal administration as a procurement agency. This situation fails to offer a systematic evaluation of the space beyond the observation that it seems to perform excellently, and creates a need to include architects' post-occupancy evaluation of the space as part of the project commission, which would allow an improvement in future projects.



As built, picture by Conchi Berenguer.

[More information:](#)

www.equalsaree.org/es/project/fem-dissabte-a-la-placa-den-baro

Images: courtesy of Equal Saree.

PAS A PAS:

Ringo Rango Route is part of Pas a Pas project in Les Planes neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

RINGO RANGO ROUTE

The Ringo Rango Route consisted of the design and construction of public steps connecting two levels in the hillside neighbourhood of les Planes, in Sant Cugat del Vallès, Metropolitan Barcelona, within the Pas a Pas project (W05). The route, in an area known locally as “Ringo Rango”, takes advantage of residual spaces between existing plots of land as shortcuts for pedestrians. The problem identified was that residents had to make long journeys on foot in a sprawling neighbourhood that had originally been designed for cars. The project was developed within the TAP-PUD Studio at ETSAV; twenty-five students organised the management, financing, logistics, design, construction and communication of the project. The execution of the project was undertaken by both students and the local community, using only donated surplus concrete samples, achieving an almost zero cost and a positive environmental impact resulting from the collaboration between the university, students, residents and construction companies.

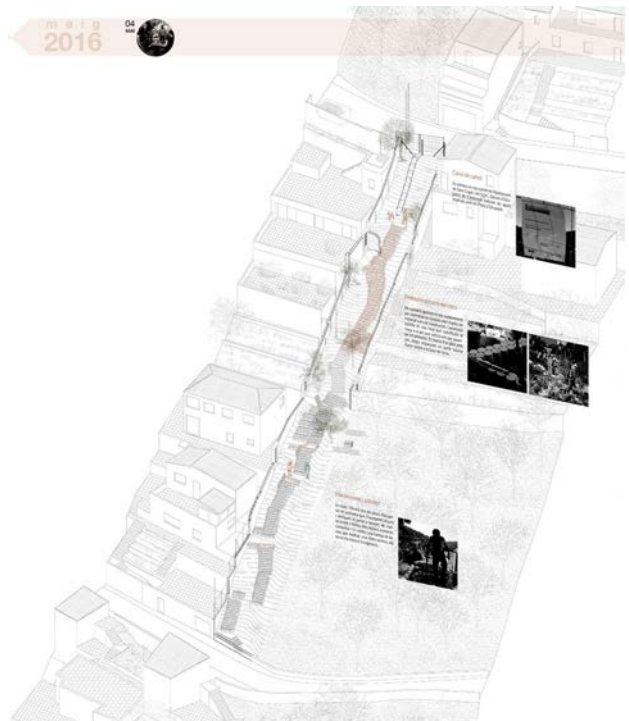
OUTCOMES:

Ringo Rango effectively transformed a wasteland into a public space, solving an accessibility problem for pedestrians navigating their neighbourhood between two different levels. Despite the acknowledgement by the municipal administration that it is responsible for the improvement of public space, it was only through collaboration with local communities and schools of architecture that the transformation was enabled. Like the other projects of Pas a Pas, Ringo Rango became a pedagogical instrument for the ETSAV School of Architecture, enabling students to have direct contact with everyday neighbourhood problems.

Crucially, the declaration of the area as an academic campus by the municipality conferred on Ringo Rango the condition of a Temporary Autonomous Zone (TAZ), which allowed non-professionals to work safely by suspending construction work regulations and meant that the project was covered by the university’s insurance policy.

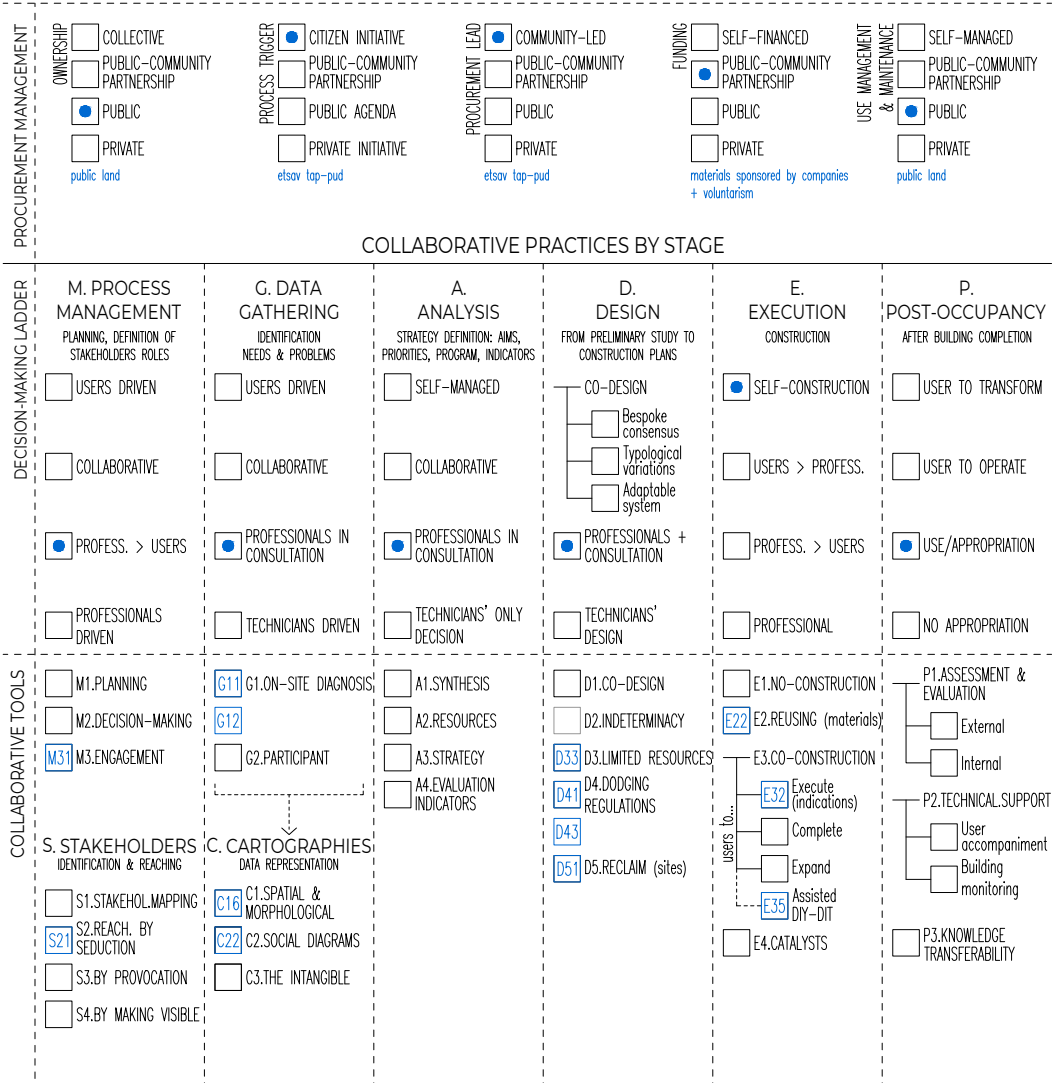


Site as found and with the intervention built. Source: A. Burgaya (2016) *Ringo Rango*. MSc thesis. Universitat Politècnica de Catalunya. Available at: www.upcccommons.upc.edu.



Organisation of ETSAV students and faculty in working teams for project development (left) and axonometry depicting a construction moment (right). Source: A. Burgaya MSc Thesis.

RINGO RANGO ROUTE



W. WORKS | PUBLIC SPACE



Site visit.

COLLABORATIVE TOOLS

Academic + public administration collaboration

The success of the REC Community Energy Refurbishment project encouraged to continue with the collaboration.

G11
G12

Data gathering > Ethnographic observation + Group walk

An analysis of car and pedestrian mobility allowed to identify circulation problems.

M31

Process management > Co-organise / develop with

The project was developed within the Pas a Pas framework, which enabled the contact with local communities and the municipality.

S21

Stakeholders > Direct invitation

Activities for the community were organised to visibilise the transformation, as well as to engage local people, for example offering snacks for children and a concrete pieces painting workshop.

C16
C22

Projective cartography > Neighbourhood + Routines & habits

A cartography of the neighbourhood was developed as part of the larger project of Pas a Pas, which included urban structure, mobility habits, and landmarks.

D33

Design > Designing for low-risk construction

Given the self-construction character of the intervention, design addressed the need of low-risk construction methods.

D51

Design > Reclaiming empty plots

A wasteland between single-family housing structures was claimed as a public passage through collective action.

D41
D43

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

In order to guarantee the possibility of works by non-professionals, including insurance, the area was officially declared as "experimental campus", like university campuses.

E22

Execution > Recycling & reclaiming components

Construction was designed with donated concrete leftover materials.

E32
E35

Execution > User to execute + Collective assisted DIY-DIT

Construction was developed by architecture students and local community.



Construction process.

STAKEHOLDERS

Civic engagement	Neighbours of Safaretjos, Santa Coloma de Gramenet Associations: Casal Municipal de Safaretjos, Asociación de vecinos de Llefia, Comisión de cultura de Llefia, Agrupament Escolta i guia (CAU de Sant Adrià), Escola Rafael Alberti, Escola de música Benet Bails, Centre Molinet, Banda Sonora, Dansa 2001, Centre de producció cultural i juvenil Polidor.
Public administration	Municipality of Santa Coloma de Gramenet
Community architects	Arquitectos de Cabecera

CONTEXT & AIMS

The Safaretjos* projects include two years of collaboration between Arquitectos de Cabecera ETSAB studio (AC) and the municipal administration and local community associations. The project started as an academic initiative in 2016, with the aim of discovering how the neighbourhood could be improved through architectural projects and actions.

The diagnostic revealed Safaretjos' dual geographical context: on the one hand it is peripheral within Santa Coloma de Gramenet, but on the other it is very close to Barcelona – on the other side of the river to it. However, it is disconnected from its surroundings and lacks public facilities. As a result, it is becoming depopulated, particularly by young people, due to the lack of opportunities and activities.

Over more than two years AC developed several projects and strategies, including an on-site technical consultation office, and addressed issues such as borders, facilities, typological identity, elderly people's needs, the problem of isolation, and children's needs. The results were presented regularly in the form of "actions" which combined academic interests and leisure purposes, gathering together academic staff and students, residents, local associations and the municipal administration.

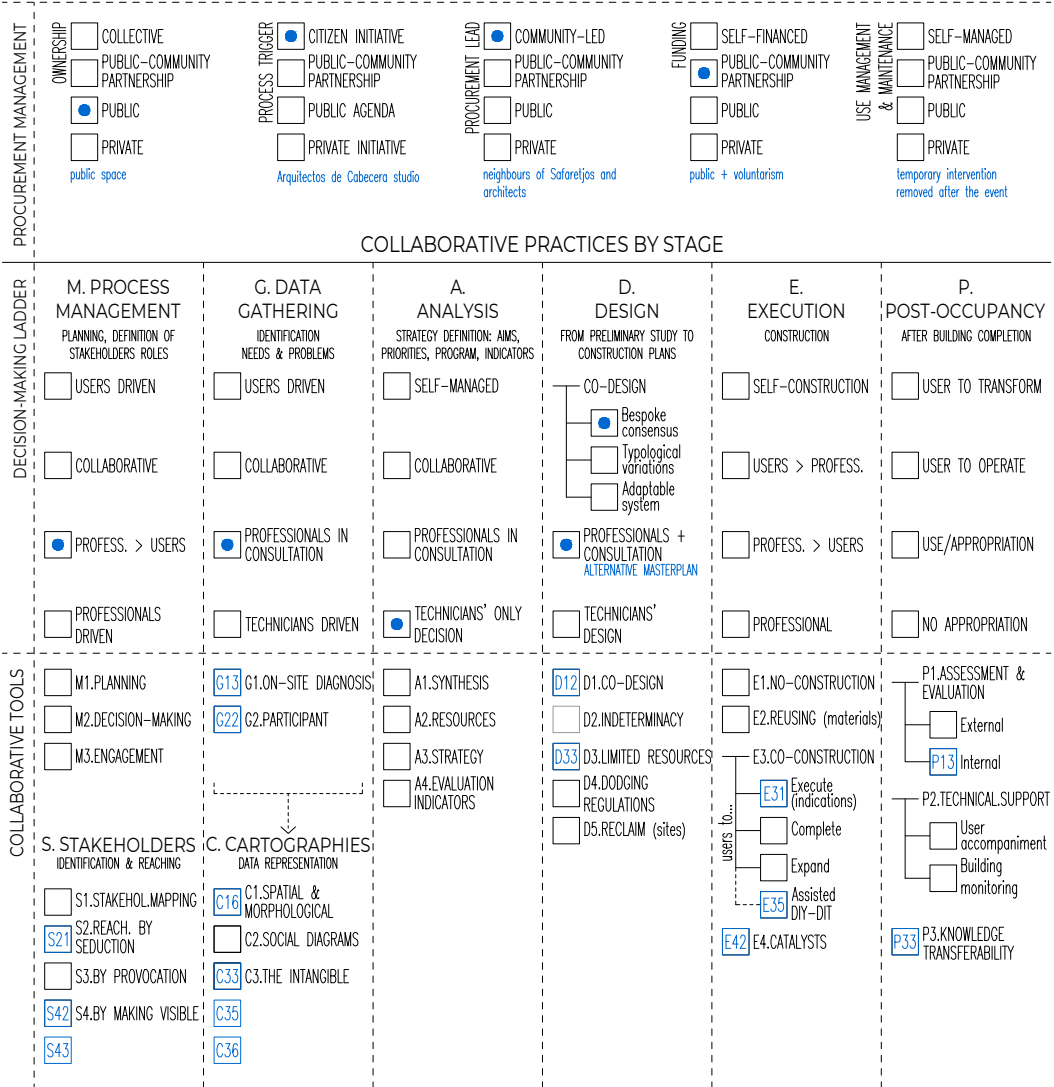
One of the key actions was the organisation of a community-building event and public debate on the situation of the area. Safaretjos was the only neighbourhood of Santa Coloma which did not have an annual community festival. These festivals are a deep-rooted tradition in Spain, and the absence of it is telling, as it evidences the lack of social cohesion and feeling of identity.

In addition to depopulation, a riverside masterplan had been approved and later halted after opposition from residents who, despite recognising that the area needed more housing to attract a new population, felt that it would have a negative impact as a result of its architectural morphology. As one of the key activities, the architects proposed an alternative to the official masterplan.

* "Lavatory" in Catalan.

W23 SAFARETJOS

SAFARETJOS



W. WORKS | PUBLIC SPACE



On-site technical support office. Left: group walk with Antoni Marzo, president of Safaretjos neighbourhood association. Centre: support office located in public civic centre of the neighbourhood in 2016. Right: in conversation with Francesc and Rosa, neighbours attended by the office.

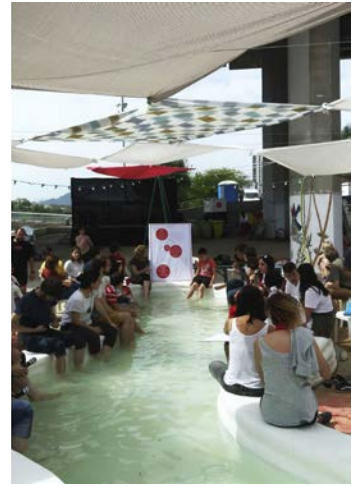
COLLABORATIVE TOOLS

	Academic brief The project was started by an academic initiative in 2016.
time ↓	G13 G22 Data gathering > On-site technical support office + Meetings with stakeholders A Citizen's Technical Consultation Office was placed in the local civic center in summer 2016, which allowed to work locally, get direct experience from the place, and encouraged informal meetings with neighbours.
	C16 Projective cartography > Neighbourhood A neighbourhood cartography was developed as a large-scale diagnostic document gathering different case studies. It is permanently exhibited in Besós riverfront park.
	C33 Projective cartography > Proximity or isolation An isochronal map was depicted to study the isolation of the area in relation to its surroundings and evidenced the lack of proximal public facilities.
	C35 Projective cartography > Memory An exploration of the decay of commercial space in the neighbourhood as a result of social and political abandonment was performed.
	C36 Projective cartography > The uncanny The cartography showed little-transited "empty areas", and thus was perceived as uncanny, lacking activity, and potentially problematic.
	E42 D33 Execution > Tactical on-site prototype + Design > Designing for low-risk construction Wastelands and abandoned neighbourhood spaces were claimed through tactical urban actions, organised partnering with local associations and neighbours. The construction of the event facilities was held by architects and neighbours using the superadobe construction method since it allowed the participation of people of all ages.
	E31 E35 Execution > Technical specifications + Collective assisted DIY-DIT Inspired in Recetas Urbanas' co-construction instructions sheets, a set of guidance documents were designed. Co-construction workshops were organised by technical staff.
	S42 S43 Stakeholders > Printed media + Digital platforms Invitations to the public event were delivered through mailing, posters and digital media.
	P13 Post-occupancy > Internal evaluation: tools & methods (I-IV) Evaluation of actions in relation to workshops, activities, conflicts, participants, fun and impact included an analysis of expectations-interest-reality. Construction workshops were evaluated in relation to what was expected, in terms of use, groups and activities. Resource management of material, time and investment was performed in each of the processes. It included funding sources, expenses, and hours spent by members.
	D12 Design > Proposing an alternative All previous cartographies were used to elaborate an alternative masterplan, since the official was recognised as necessary by neighbours but rejected due to its visual impact.
	P33 Post-occupancy > Process reports A process report is available at www.arquitectosdecabecera.org .

W23 SAFARETJOS

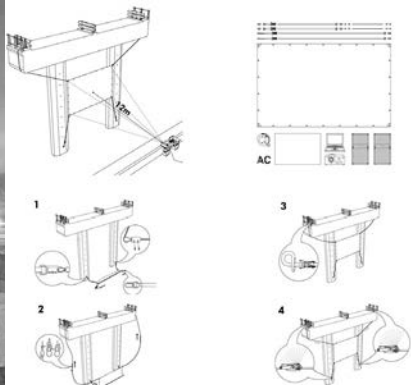


Co-construction workshops of the lavatory using the superadobe building method.



On-site debate between neighbours, academics and administration.

W. WORKS | PUBLIC SPACE



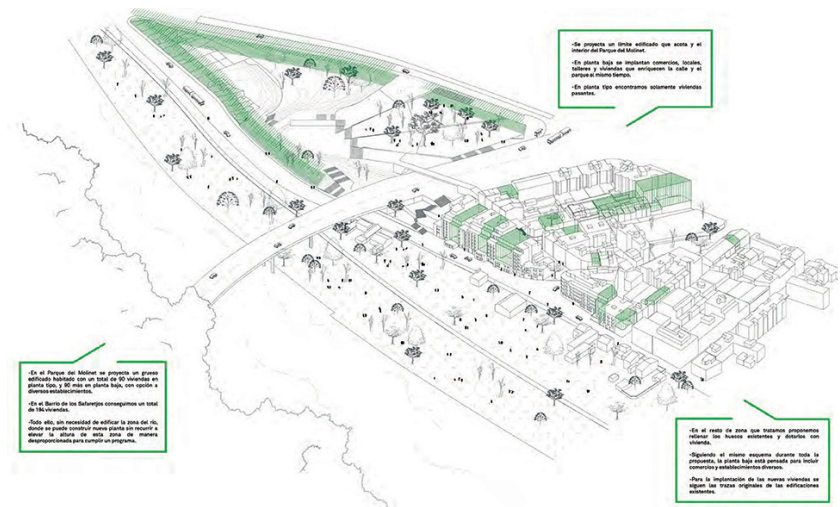
Action consisting in claiming an infrastructure's underneath wasteland as a space for public enjoyment.

OUTCOMES

The co-organised events became very successful in regard to community engagement and subsequent debates. Initially, the festival was a vehicle to bring the community together through the construction of the temporary facilities that would host it. Secondly, throughout the day, several debates about the neighbourhood and its problems and potential took place between residents, politicians and academics. Unfortunately, there was no transcription of the conclusions, nor of any kind of agreement between the parties involved.

In contrast, the project was not successful in the long run. First, the facilities of the event were not envisioned as reusable as in the case of children's playgrounds or similar leisure spaces. The lack of use and maintenance of the facilities meant that they deteriorated and created an appearance of being abandoned. Secondly, since the community events were initiated and coordinated by external parties, they were discontinued after 2018. Both situations reveal the need to actively involve local communities and the local municipal administration and ensure their long-term commitment to the project.

Finally, and most importantly, the alternative masterplan was not taken into consideration by the municipality, thus the project failed in its ambition to allow mediation between local communities and the municipal administration. The aim of generating a longer-term impact in terms of urban transformation or planning was not achieved, which can be attributed to the lack of convergence between different political agendas.



Alternative masterplan axonometry in preliminary studies.

[More information:](#)

www.arquitectosdecabecera.org/AC/en/portfolio/fem-festa-fem-safaretjos

Images: courtesy of Arquitectos de Cabecera.

ANNEXE 3: TOOLKIT AS INSTRUMENT FOR THE ANALYSIS OF 23 WORKS IN BARCELONA



Top-down: toolkits Version 3, Lacol (2 images), Arqbag, Celobert, TTAC ETSAB (2 images).
Right: sessions diagram.

Analysis sheets of collaborative works, developed for this thesis through Participatory Action Research:

HOUSING

NEW HOUSING MODELS

- W01 ATRI + APROP Tactical Accomodations
- W02 La Borda Cooperative Housing
- W03 Cirerers Cooperative Housing
- W04 Guimerà Senior Cohousing

REFURBISHMENT

- W05 Pas a Pas les Planes
- W06 Community Energy Refurbishment (REC)
- W07 Lancaster, 'Guernika'

FACILITY

RECOVERY INDUSTRIAL HERITAGE

- W08 Can Batlló Complex
- W09 Warehouse 11
- W10 Coopolis Phase 0
- W11 Arcadia School
- W12 Can 60
- W13 La Escocesa Warehouse L

EXTENSION/TRANSFORMATION EXISTING

- W14 (e)co Platform
- W15 Pere Grau Space
- W16 Coeducative Playgrounds

TEMPORAL APPROPRIATION

- W17 Bocachica

PUBLIC SPACE

SKATEPARKS

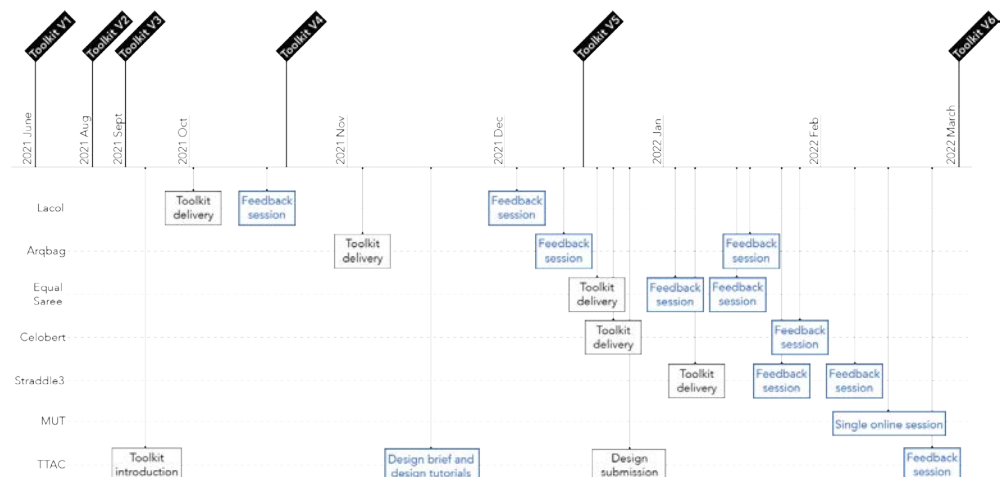
- W18 SK8+U Arbúcies
- W19 La Santa Urban Sports Park
- W20 Moviment Obrer Square

SQUARE AND STREETS

- W21 Baró Square
- W22 Ringo Rango Route

TEMPORAL APPROPRIATION

- W23 Safaretjos



STAKEHOLDERS ATRI SYSTEM

Civic engagement	Local community, depending on project
Public administration	Local administration, depending on project
Community architects	ATRI TEAM: David Bravo, Alex Giménez, Straddle3 and Eulia.eu (architects), Pablo Feu and Anabel Garcia (lawyers) and la Hidra cooperative (social transformation research)
Private stakeholders	Could be potentially included, depending on the project

STAKEHOLDERS APROP SYSTEM

Civic engagement	-
Public administration	Municipality of Barcelona (Tonet Font)
Community architects	Straddle3, Lacol and Bestranten-Hormias architects (containers), Straddle3, Yaiza Terré and Eulia Arkitektura (Raval building)
Private stakeholders	-

CONTEXT & AIMS

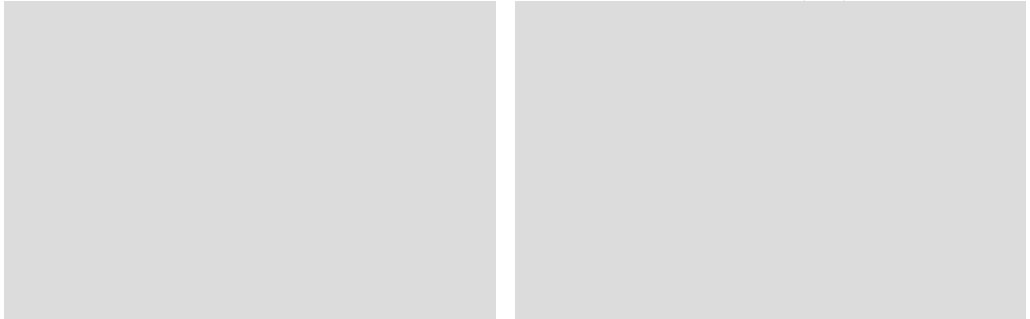
The Agrupacions Tàctiques de Repoblament Inclusiu (ATRI, Tactical Accommodations of Inclusive Repopulation) is an urban voids filling strategy that instrumentalises affordable housing for urban improvement at different levels. ATRI understands construction as a social project and an opportunity for distributing economic impact at every point in the procurement process: from access to land (refilling urban voids), public tenure competitions (in small companies), design and construction (based on Habraken's theory of supports and an assisted do it yourself/do it with others process) and self-management.

ATRI's first test location was in 2015, addressing the challenging situation of the Gimnàs Social Sant Pau (Sant Pau Community Gym), a cooperative social project in the form of a gym, whose continuity was threatened due to economic difficulties. The project aimed to guarantee protection for the building, a historical casa-fàbrica (house-factory) and the financial stability of the cooperative through the building of affordable housing units above the existing building.

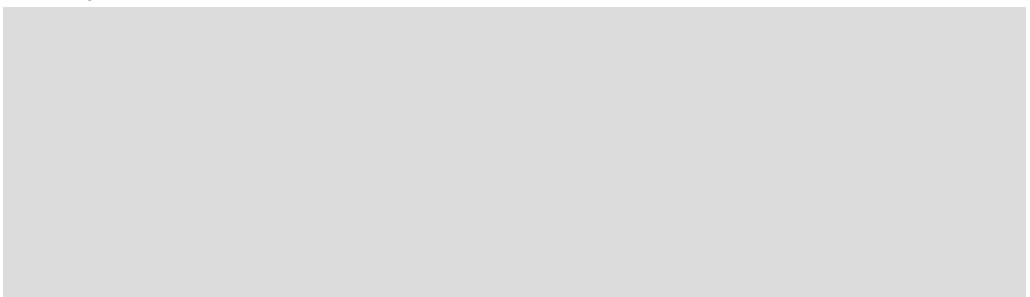
Gimnàs Social Sant Pau encouraged the municipality to buy the land and allow the cooperative to build and lease the apartments with surface rights for 15 years: 30% of the units would have been designated as emergency homeless shelters. Taking American politician Bernie Sanders' Community Land Trust (CLT), established in the 1980s in Vermont, United States, as a model, ATRI Sant Pau would have represented the first rental cooperative in Barcelona. Although the proposal never came to fruition, it evidenced the feasibility of the tactical housing approach known as "urban dentistry" and its potential to be implemented elsewhere in the city. Feasibility studies are currently being developed in the Poblenou neighbourhood.

A few years later, the municipality saw an opportunity to implement a number of ATRI features by developing the public emergency homeless shelters Allotjaments de Proximitat Provisionals (APROP, Proximity Provisional Lodgings). APROP is based on the temporary use of underdeveloped vacant land to accommodate people affected by the housing emergency, and by doing so to foster the circular economy. The industrial approach and low-emission construction is based on shipping container units, which turns the building into a nomadic structure that can be placed on plots of land that qualify as a public facility, pending development.

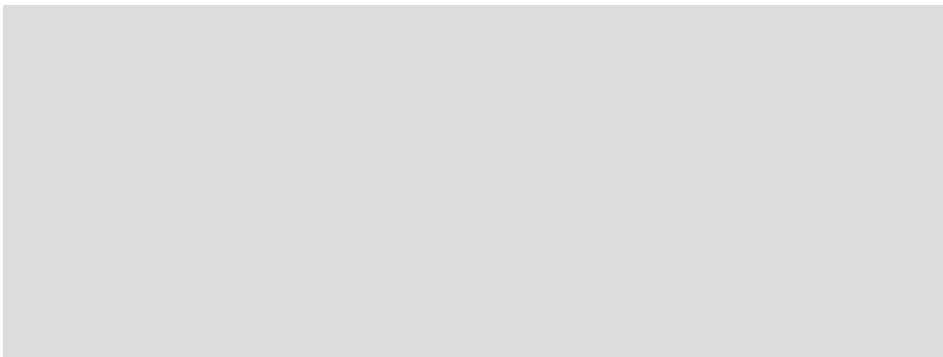
The ATRI team is currently developing two projects. On the one hand, there is Wikihousing (wikihousing.eu), as an adaptation of the system to be applied in Barcelona on a larger scale with municipal support. Secondly, a new building for housing young people in Caldes de Montbui, near Barcelona, is currently in the construction phase. Caldes ATRI included a co-design approach, and is built with sustainable materials, including prefabricated container units and Cross Laminated Timber (CLT) wood panels.



Left: Sant Pau Community Gym's swimming pool was built under the existing house factory in a structural effort. Right: Section of ATRI Sant Pau.



ATRI system feasibility studies.



ATRI construction phases.

W01

ATRI + APROP TACTICAL ACCOMMODATIONS

Wikihousing.

COLLABORATIVE TOOLS ATRI SYSTEM

G21

Data gathering > Diagnostic workshops

For example, with future dwellers and local associations. In ATRI Sant Pau, with the Sant Pau Social Gym (workers cooperative) and Raval associations. In the case of Caldes, with a youth association.

M33
D11

Process management > Discussion workshops + Design > Co-design workshops

ATRI system includes dwellers in decision-making in different stages of the project, including co-design workshops.

D52
E24

Design > Filling in the gap + Execution > Parasite

"Urban dentistry" through completing vacant building volumes.

E22

Execution > Recycling & reclaiming components

Prefabricated construction with shipping containers.

E33
E35

Execution > User to complete + Collective assisted DIY-DIT

Three stages: black (prefabricated), grey (on site, local professionals with do-it-with-others) and white (do it yourself)

P31

Post-occupancy > Manuals & toolkits

To broadcast the model and allow implementation elsewhere.

COLLABORATIVE TOOLS APROP SYSTEM

D31

Design > Intermediary situations: "the meanwhile"

Container construction turns the building into a potentially nomadic infrastructure.

D51

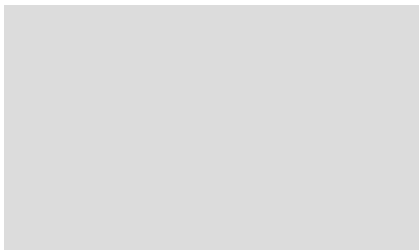
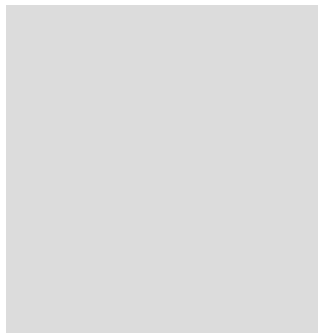
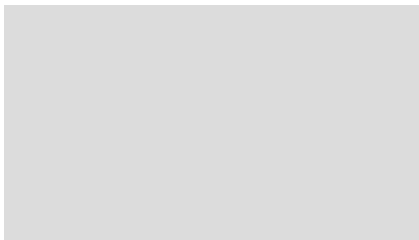
Design > Reclaiming empty plots

Temporary use of underdeveloped plots qualified as public facility.

E22

Execution > Recycling & reclaiming components

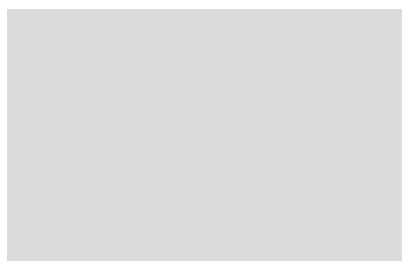
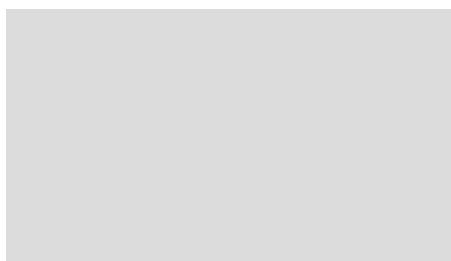
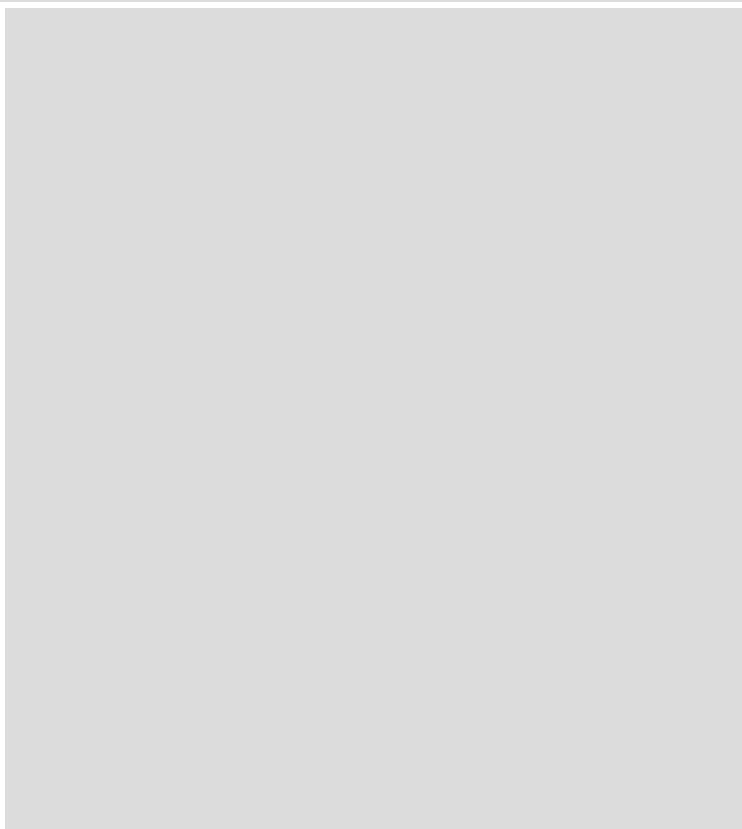
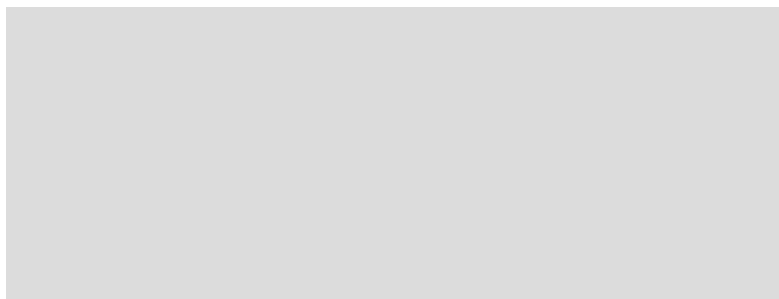
Reuse of shipping containers.



APROP Ciutat Vella: Container housing units were designed collaboratively by Straddle3, Lacol and Bestranten-Hormias architects with one-container and two-container modules. These industrialized elements could be piled up and linked to a circulation core in multiple dispositions. The first building was completed in 2019 in Ciutat Vella neighbourhood, designed by Straddle3, Yaiza Teré and Eulia Arkitektura (images and plan).

W01

ATRI + APROP TACTICAL ACCOMMODATIONS



W. WORKS | HOUSING

Youth Housing Caldes:

OUTCOMES

The ATRI project evidences the possibilities that derive from approaching design as a system, rather than as a single building. While the latter relies on form, the ATRI system explores the opportunities that emerge from different scenarios, from ownership schemes to the kind of land that is available. As a system, the overall ATRI strategy can be implemented with multiple variations that emerge from specific local contexts, in terms of both formal and procurement strategies, as in the case of Sant Pau, or Caldes. In this regard, ATRI aims to create an impact in each of its procurement phases by including stakeholders in decision-making in relation to strategy, design and construction, including the local economy and the social fabric. Since ATRI is ultimately a process, the method is adaptable to the specific context, making the most of the opportunities it offers.

The comparison of ATRI and APROP enables a discussion of the opportunities and limitations that emerge from a system adapted to two different forms of procurement (community-led and public-led) and users (long-term and short-term). APROP retains some features of the original ATRI proposal, such as the prefabricated construction, the reclaiming of empty plots and social impact, but it also presents fundamental differences. The APROP municipality-led process, the procurement through standard mechanisms of emergency shelter provision, and the temporary status of residents derive from a more conventional procurement process in which residents are not included in decision-making, nor in co-design or co-construction. In other words, while ATRI aims to be a self-managed and community-led building, APROP is a specific type of public housing (highly experimental) unit that operates as a public facility with the aim of achieving a stronger social impact on its surroundings than that of typical social housing buildings, and challenges conventional forms of social housing procurement and construction.

More information:

ATRI: www.atri.city

APROP: www.ajuntament.barcelona.cat/dretssocials/es/innovacion-social/aprop
www.straddle3.net/es/proyectos/aprop-allotjaments-de-proximitat-a-ciutat-vella-barcelona

ATRI Sant Pau: www.straddle3.net/es/proyectos/habitem-el-sant-pau

ATRI Poblenou: [www.straddle3.net/es/proyectos/](http://www.straddle3.net/es/proyectos/implementacion-sistema-atri-en-poblenou)
[implementacion-sistema-atri-en-poblenou](http://www.straddle3.net/es/proyectos/implementacion-sistema-atri-en-poblenou)

Youth Housing Caldes: www.straddle3.net/es/proyectos/habitatge-jove-caldes.
www.habitatgejovecaldes.cat

Images: courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	La Borda's residents, Can Batlló social movement
Public administration	Municipality of Barcelona (cession of plot)
Community architects	Lacol cooperative of architects
Technical staff	Arkenova (engineer), Miguel Nevado (structure), AumedesDAP (DEO), Societat Orgànica (environmental engineer), PAuS – Coque Claret and Dani Calatayud (consultants), Grisel·la Iglesias – Àrea acústica, José Juan Martínez Larriba (project manager), La Ciutat Invisible (coordinator) and Holon (services design)

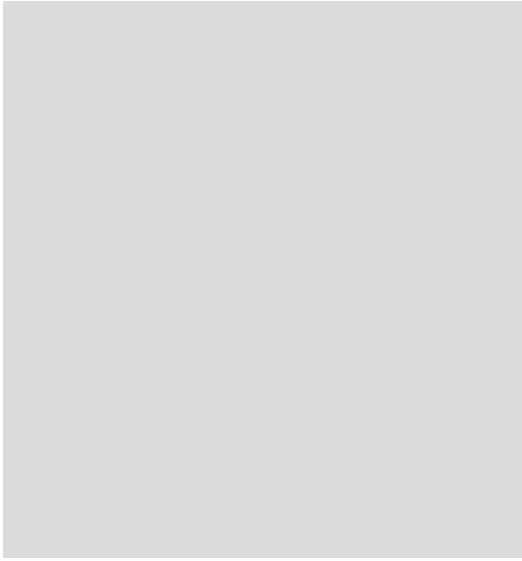
CONTEXT & AIMS

La Borda is a self-organised housing cooperative that aims to guarantee access to decent, non-speculative housing. It aims to place use value at its centre through a collective structure. The idea of a housing cooperative started in 2012 as a community initiative resulting from Can Batlló (W08), that promoted the recovery of the industrial site and of the fabric of the neighbourhood and a cooperative structure in the neighbourhood of Sants. The project is located on a public plot of land, making the housing units qualify as protected housing, leased by the City Council for 75 years. The plot is positioned on the border of the Can Batlló complex and the historic Bordeta neighbourhood. There are three intersecting principles of the project:

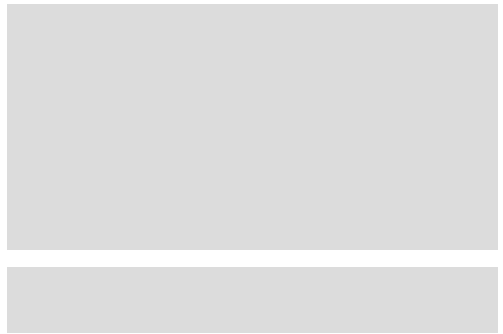
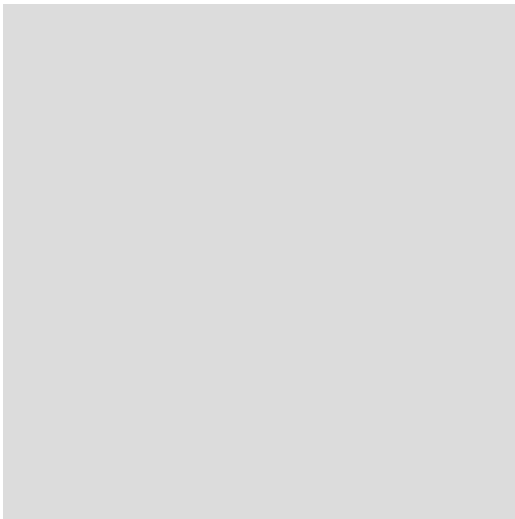
- (1) Redefining collective housing. The building programme proposes 28 houses (40, 60 and 75 m²) and communal spaces that allow private space to be extended into public space and that enhance community and neighbourhood life.
- (2) Sustainability and environmental quality. La Borda has been built with the minimum environmental impact, both during construction and the lifetime of the building. The goal is to achieve comfort in domestic spaces with minimum energy consumption.
- (3) User participation. Self-promotion and subsequent collective management mean that the participation of future users in the process (in design, construction and use) is the most important and distinctive variable of the project.

During the design, participation was articulated through the user working group on architecture, which was the link between the technical team and the general assembly of La Borda. This working group was in charge of preparing the architecture workshops. Several co-design workshops included discussions on the visual aspects of the project, the project's programme and strategy, the environmental strategy, typology, sessions for the validation of the preliminary project and detailed sessions on specific elements of the project. A distinctive feature of the project is that architects were involved in social activism in Can Batlló, meaning that they had belonged to the core group of La Borda from the beginning.

– excerpts from the project description from the website, translated by the author.

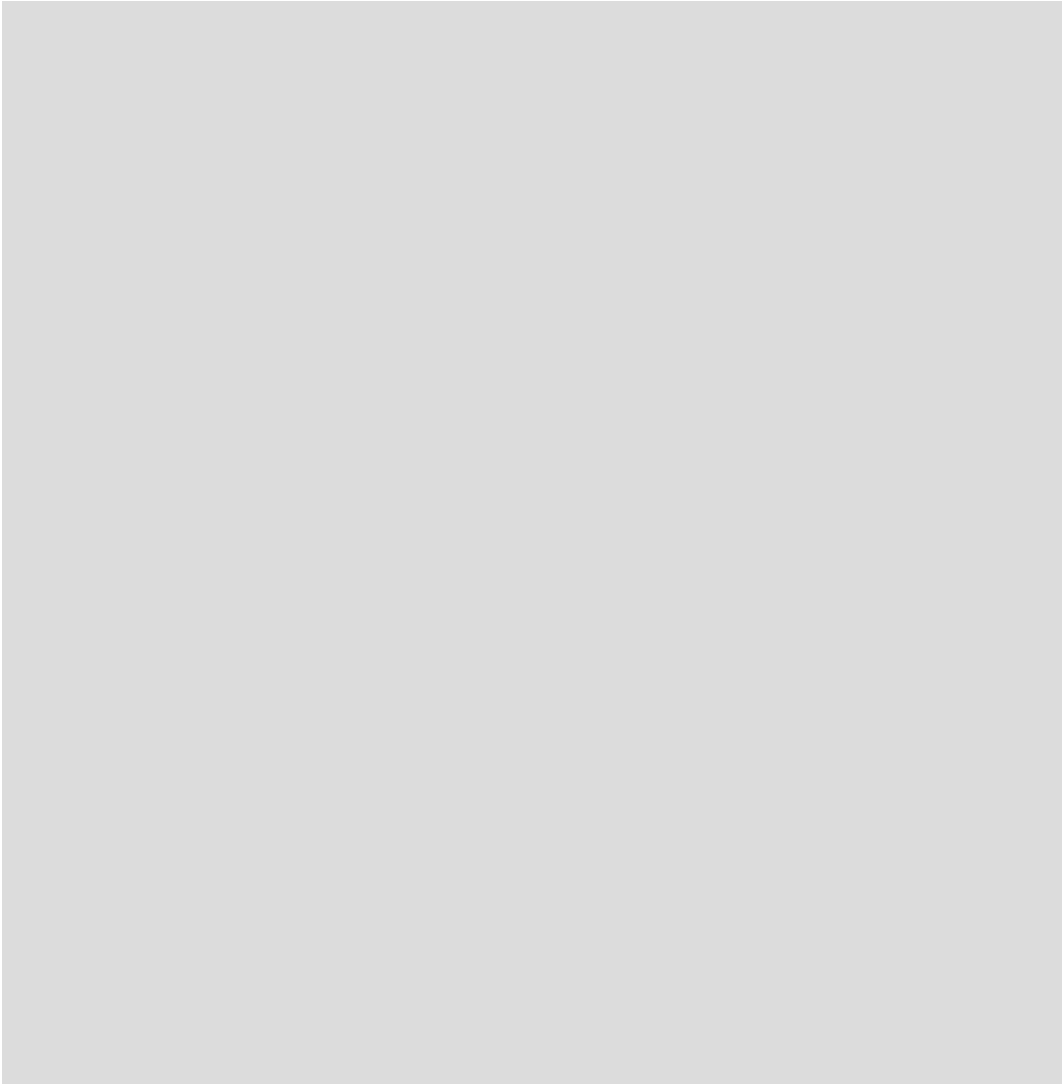


La Borda organizational diagram (left) and as built (right).

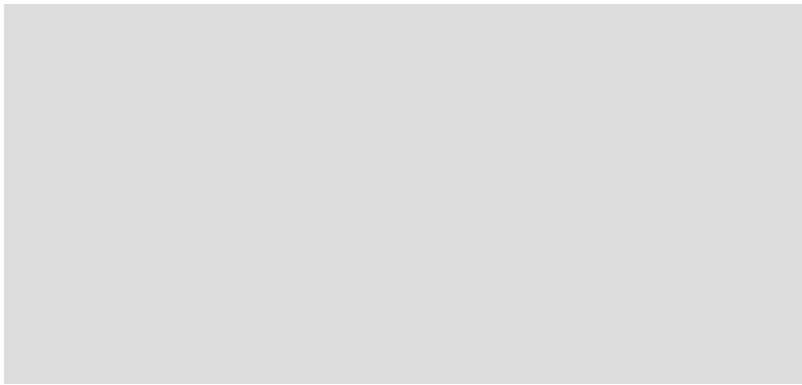


La Borda typical plan and housing units system. Bottom right: housing units layout as derived from consensus co-design workshops: S, M, L sizes.

W02 LA BORDA COOPERATIVE HOUSING



W. WORKS | HOUSING



Private and shared spaces in a conventional project and in la Borda, as agreed with dwellers. The management of resources included strategical allocation of spaces.

COLLABORATIVE TOOLS

M32

Process management > Involving decisive partners

La Borda emerged from Can Batlló grassroots movements' historical claims. An agreement with the municipality in 2014, under Xavier Trias' government, became the starting point.

**G21
G22**

Data gathering > Diagnostic workshops + Meetings with stakeholders

It allowed dwellers to gain a basic technical knowledge, spatial understanding and vocabulary on architecture. Activities included explanations by architects and users' redrawing of their houses. The 'architecture workgroup' of la Borda, formed by future dwellers, acted as a mediator between teams of technical staff and the general assembly of the cooperative.

**C23
C24**

Projective cartography > Users' needs (I): individual + Users' needs (II): collective

Interviews allowed to determine users' specificities at a level of household needs, energetic performance, and financial situation.

A21

Analysis & Strategy > Financial analysis & co-finance strategies

Interviews allowed to determine the users' financial situation. As a key strategy, the building was feasible thanks to a co-finance campaign.

A31

Analysis & Strategy > Strategic action plan

Driving ideas were collectively defined as guidelines to be followed throughout the process.

D11

Design > Co-design workshops

Spanning from general activities, such as an imaginary pin-up, to specific ones, such as working with models and plans.

**D21
D22**

Design > Enabling: user appropriation + Enabling: user manipulation

Users operate the greenhouse covering the central patio. In addition, the soft facade allows user appropriation and manipulation, and corridors are designed to be appropriated by users.

**D23
D41**

Design > Enabling: adaptable system + Legislative blind spot

Interchangeable rooms between units are registered as collective spaces, a naming responding to circulation spaces. With that strategy, rooms are not bound to specific dwellings.

D24

Design > Typological variations

Housing units are defined as S, M, L sizes to accommodate different household sizes, not determining the composition.

D25

Design > Multiple scenarios

The generosity of the room sizes allows a number of different subdivisions to respond to different potential users' needs. In addition, certain rooms can change access between adjacent dwellings.

E22

Execution > Recycling & reclaiming components

Certain elements such as the pavement in the shared kitchen of the groundfloor are built with leftover CLT wood from upper floor construction.

**E33
E35**

Execution > User to complete + Collective assisted DIY-DIT

Some parts of the building were self-built by dwellers and sympathisers of the project. In addition, certain elements were finished by dwellers during inhabitation, to save costs.

P12

Post-occupancy > External evaluation: stakeholder review

The commission of architecture developed process review workshops, which included a process review diagram.

P13

Post-occupancy > Internal evaluation: tools & methods

La Borda was analysed as part of the larger social struggle of Can Batlló, including stages and activities.

**P21
P22**

Post-occupancy > Post-occupancy technical support + Building monitoring

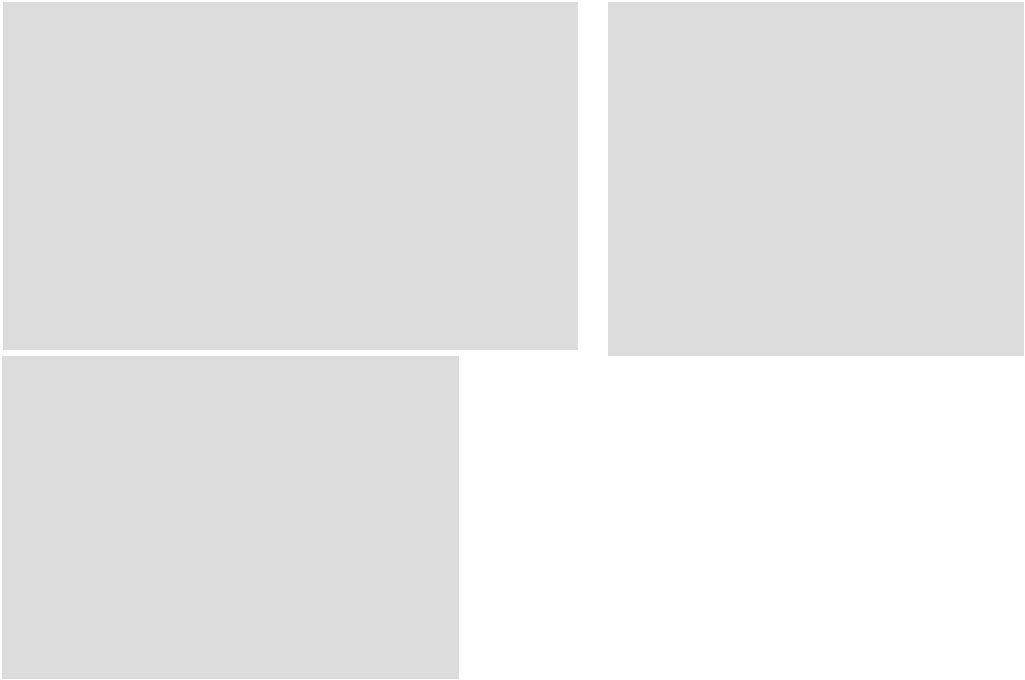
Architects met residents regularly and carried out accompaniment tasks during inhabitation. In addition, the energetic performance of the building was monitored.

P31

Post-occupancy > Manuals & toolkits

Iacol published two books about their experience: *Building Collectively* (2018) and *Habitar en Comunidad* (2018, co-authored with La Ciutat Invisible).

W02 LA BORDA COOPERATIVE HOUSING



Top left: La Borda co-design workshops. Bottom: Drawings from workshops.



W. WORKS | HOUSING

OUTCOMES

La Borda became a keystone in the implementation of the cooperative housing model in Barcelona for several reasons: first, by challenging given cultural assumptions about ownership, households and collective housing typology and second, by becoming a catalyst for legislative change, with new regulations such as "surface rights" (the leasing of public land for cooperative housing projects) and "cession of use" (legal agreement between the cooperative and its residents for the use of its facilities) to allow the use of public land for cooperative buildings and collective property and the suspension of the legal requirement to provide car parking spaces in cooperative housing projects. The experimentation carried out at la Borda, in terms of both typology and construction of the building sentailed a process of navigating outdated regulations, for example in rooms that can belong to adjacent dwellings, and the greenhouse (Avilla-Royo, Jacoby and Bilbao, 2021). Third, in 2016 the technical teams that supported la Borda, Lacol and La Ciutat Invisible created the foundation la Dinamo, which develops tools and promotes the cooperative housing model. Furthermore, la Borda is creating a pedagogical impact on its residents, in relation to their environmental awareness of the building and the process of living collectively, which strengthens mutual support networks. The pedagogical effect also impacts visitors to the building, including public housing agencies, who see in la Borda the positive impact of Cross Laminated Timber (CLT) construction and passive energy systems, and gain an understanding of the proactive approach by residents. Finally, after the experience of la Borda the municipality held public competitions in 2017 and 2020 for developing further cooperative housing projects on public land.

More information:

'Sustainable building, sustainable living: La Borda, Barcelona by Lacol', *Architects' Journal*, (2020).

'Cooperativa de vivienda La Borda', *Arquine*, 94 (2020)

Montaner, J.M. (2020) 'La arquitectura de la Borda: contexto, gestión y forma', *Summa+*, 176, pp.102-113.

'Can Batlló', *BauNetzWOCHE* (2020)

'Wohnen in Barcelona / Living in Barcelona', *Detail* (2020)

"Cooperativa de vivienda La Borda", PLOT, nr. 50 (agost/setembre).

Avilla-Royo, R., Jacoby, S. and Bilbao, I. (2021) 'The Building as a Home: Housing Cooperatives in Barcelona'. *Buildings*, 11(4), p.137.

Images courtesy of Lacol Architects cooperative. Photographs by Lacol and Lluç Miralles.

STAKEHOLDERS

Civic engagement	Sostre Civic housing cooperative (as developer)
Public administration	Municipality of Barcelona (cession of plot)
Community architects	Celobert cooperative of architects
Technical staff	Jorge Blasco – Estudi M103 (structures), Àurea acústica, and Grup Nou (construction manager)

CONTEXT & AIMS

The Cirerers cooperative housing project emerged from a competition for the leasing of public land for cooperative housing promoted by Barcelona City Council in 2017 and completed in 2022. Thus, the land is owned by the municipality and the building belongs to the cooperative Sostre Civic, which acted as the developer and intermediary between the City Council, the residents and the technical staff. Its co-design project included users at all stages. In addition, almost all the companies involved in the project emerge from the Social and Solidarity Economy: architecture, engineering, promotion, construction, group management, financing and insurance.

Collective and community spaces give meaning and identity to the social project and become the central element of the architectural co-design process. In the case of Cirerers, four types of spaces are proposed, which are defined by their degree of openness and connection with the community:

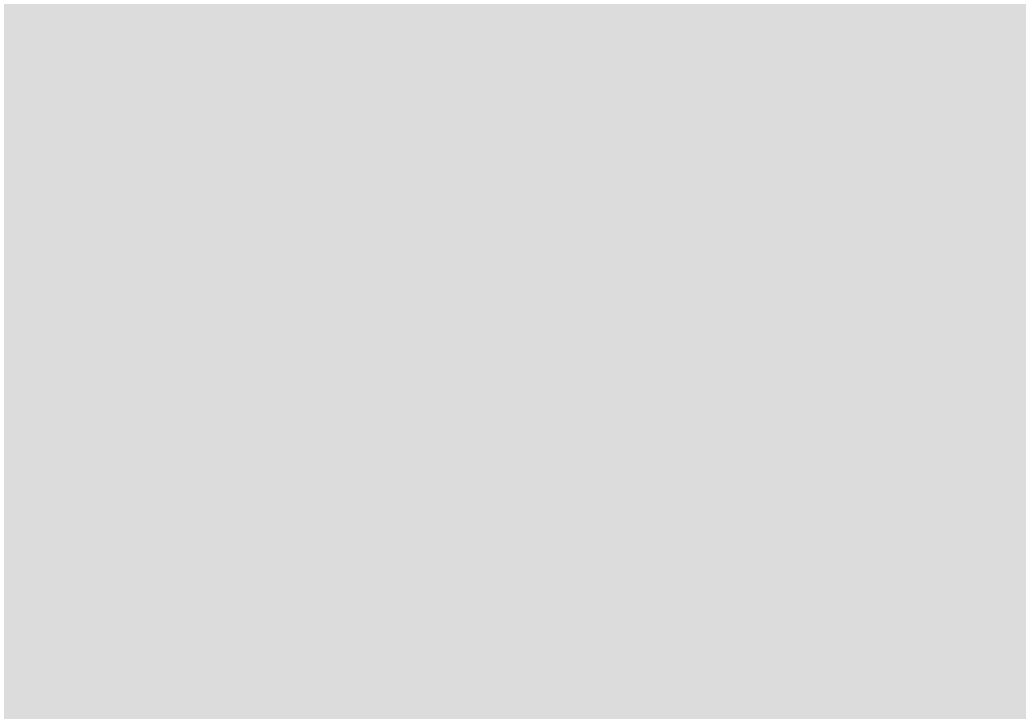
- Open spaces for the neighbourhood, located on the ground floor: cooking and catering workshop-school where local women can train.
- Spaces for community use defined by users: 240 m² of community space on the ground floor and 240 m² of outdoor terraces. The latter are located on the roofs of the 3rd, 6th and 7th floors and can be used as a community dining room, for outdoor recreational activities and as a garden.
- Spaces for collective use: intermediate collective space, between private and communal. Defined as a “street-landing”, 240 m² are distributed over six floors. These access streets contain shared laundries and areas to be appropriated in front of the flats.
- Spaces for private use: the building has a total of 32 dwellings: 22 x 40-45 m² units, 10 x 60-65 m² dwellings.

The construction process involved in Cirerers has generated a minimal environmental footprint and incorporates efficient and renewable facilities, having been designed so that the environmental cost associated with the manufacture, transport, commissioning and future recycling of the building will be minimal: this includes during occupancy. It has reached Passive House efficiency standards, as an almost zero-consumption building (nZEB) that goes further than what is required by current energy-saving regulations.

– Taken from Celobert website, translated and adapted by the author.



Cirerers building as completed.



Plan.

W03 CIRERERS COOPERATIVE HOUSING

W. WORKS | HOUSING

Community spaces, axonometry as distributed in the building (left) and as built (right).

Annexe 3: Toolkit as instrument for the analysis of 29 works in Barcelona

COLLABORATIVE TOOLS

Public plots competition for cooperative housing in 2017

Sostre Civic as a cooperative with a technical team that included Celobert as architects was awarded for the Cirerers street plot in the competition organised by the municipality. Sostre Civic operated as procurement self-managed agency, including process management roles, calendarisation and setting financial strategy.

S21

Stakeholders > Direct invitation

Dwellers are members of the Sostre Civic cooperative, who contacted potentially interested users through their internal organisation media.

G22

Data gathering > Meetings with stakeholders

The diagnosis phase included meetings with different stakeholders, neighbours and future dwellers.

C16

Projective cartography > Neighbourhood

A study of uses of the groundfloor of the neighbourhood determined the needs that Cirerers could respond to.

D11

Design > Co-design workshops

Around 10 workshops were organised during the design phase across all levels of the project, from general materialisation to specific ones, such as installations. Debates were alternated with questionnaires aiming to reach agreements by consensus. For the distribution of the specific dwellings, one to one meetings with dwellers were organised.

**D21
D22**

Design > Enabling: user appropriation + Enabling: user manipulation

The building encourages manipulation of certain elements with a soft balconies facade and shared spaces. In addition, each "street-landing" is self-managed by the neighbours of each floor.

D42

Design > Camouflage

Several design decisions allowed to dodge regulations that limited design possibilities. That is the case of the community kitchen of the 6th floor, to be installed in a post-occupancy phase. Another example is the duplicity of kitchen air extraction system: a conventional one (inoperative) and a kitchen hood with carbon filter. As a third example, a community-shared room in the groundfloor was declared as the normative residues room.

E33

Execution > User to complete

The limitations of Spanish regulations obliged the building to be built through professional construction. However, users were encouraged to complete the construction according to their needs.

**P12
P13**

Post-occupancy > External evaluation: stakeholder review + Internal evaluation: tools & methods

Both external evaluation with stakeholders and internal one about tools and methods are planned.

P21

Post-occupancy > Post-occupancy technical support

Workshops with users and instructions for introducing dwellers to the heating water system and double-flux ventilation system.

P22

Post-occupancy > Building monitoring

Including environmental systems and indicators.

W03 CIRERERS COOPERATIVE HOUSING



The building under construction with CLT wood.



Building as completed, from the street (left) , and street-landings (right).

OUTCOMES

Cirerers cooperative housing building, along with the other available plots of land in the 2017 competition (La Balma, La Chalmeta, Sarrià, and la Xarxaire) represent the second stage of cooperative housing in Barcelona, following the prototypes of the la Borda and Princesa buildings. In other words, they represent the consolidation of the model and a shift from the uniqueness of the prototype to the system. As such, the Sostre Cívic housing cooperative, which also developed Princesa, played a fundamental role in leading the process as an umbrella cooperative, within which Cirerers is one of the so-called “phases”.

As acknowledged by the architects, the severe regulatory restrictions involved in Cirerers resulted in a lower level of typological experimentation than was desired, although the building is generous in terms of shared spaces, which resulted from residents’ commitment to the communal project. This also enabled the use of the CLT system in the building, despite its higher cost, in an attempt to reduce the carbon footprint of construction, and the design of community spaces with an impact on the neighbourhood on the ground floor. In addition, some minor parts of the building will be completed and customised by users during the post-occupancy phase.

Cirerers evidences the difficulties of fitting a housing project based on a communal and sustainable form of living, in a legal framework and approach based on a system of private and individually-owned property, with outdated environmental regulations. This was seen in the element of deception involved in the construction costs and the camouflage of certain communal uses under a more conventional presentation. While la Borda was promoted by the municipality as a prototype, and thus an exception, Cirerers underwent more conventional procurement assistance from the municipality, which translated into a less precise understanding of its particularities as a housing model that was distinct from either a public or a private one (Avilla-Royo, Jacoby and Bilbao, 2021). In addition, there was a change in the density of housing units during the design stages from 27 to 32 due to financial reasons, a change of use on the ground floor and a significant variation in the types of residents living there.

More information:

www.celobert.coop/projete/cirerers.

Avilla-Royo, R., Jacoby, S. and Bilbao, I. (2021) 'The Building as a Home: Housing Cooperatives in Barcelona'. *Buildings*, 11(4), p.137.

Images: Celobert website, photographs by Guifré De Peray and Joan Guillamat.

STAKEHOLDERS

Civic engagement / private

Four residents (two couples)

Community architects

Arqbag architects cooperative

Technical staff

COECO building cooperative

CONTEXT & AIMS

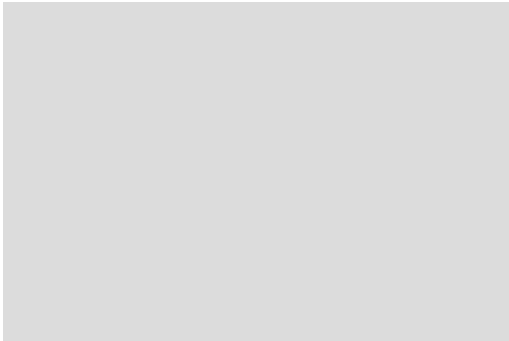
Guimerà Senior Cohousing repurposed an agricultural warehouse as senior co-housing building for two couples. The analysis of individual users' lifestyles, routines and current and future needs were analysed in a co-design process. This allowed the architects to plan and reorganise the spaces according to specific uses in relation to the degrees of collectivisation required at each point in time for each of the residents: as individuals, as a couple, as a community and even for neighbourhood spaces.

To solve the transition in scale from a warehouse to cohousing use, the project proposes the insertion of a central facilities block that mediates between multiple-use spaces and a degree of privacy. The project includes bioclimatic and passive environmental strategies. Rammed earth bricks become the main construction material of the project, operating as a humidity regulator and providing thermal inertia.

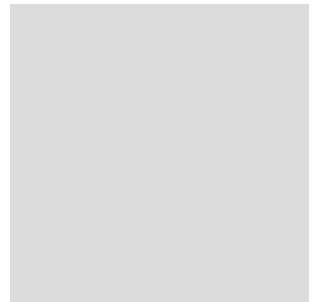
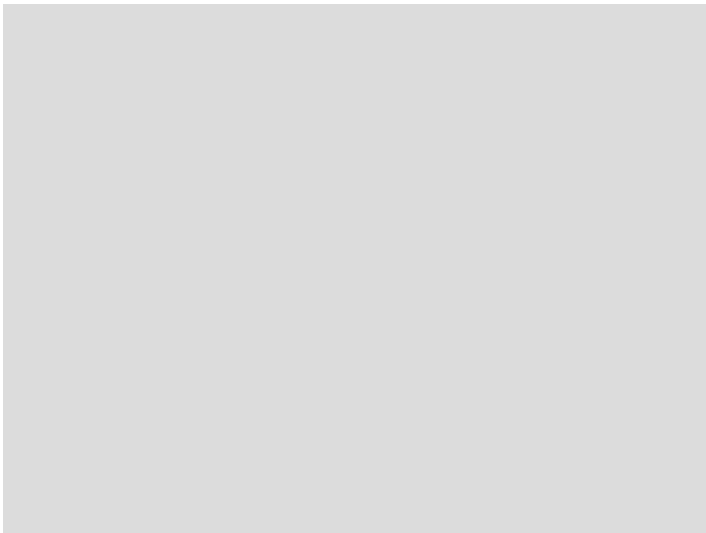
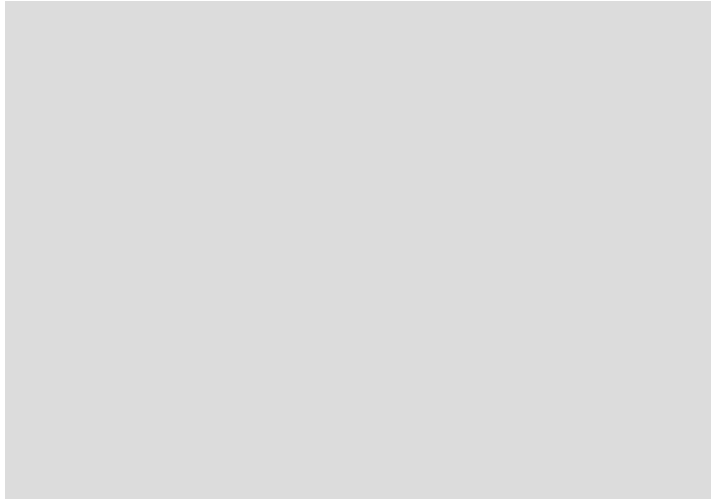
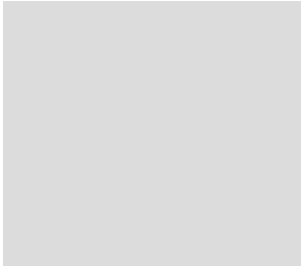
The programme follows a "height-based privacy gradient". On the ground floor, spaces for most communal uses are planned to connect with the street and the garden: the kitchen, living room, dining room, shared bathroom, and a large multipurpose free space. The most private spaces, however – bedrooms and individual bathrooms – are sited on the first floor. In between, the two wooden mezzanines can accommodate complementary needs as they occur.

The execution was partly developed by residents, who built the stone wall as well as all the carpentry elements (except the structural ones) and the furniture. In addition, residents have continued non-essential construction works during occupation, completing the building according to their needs.

– Information courtesy of Arqbag, translated and adapted by the author.



Guimerà village in Catalonia.



Co-design and co-construction.

W04 GUIMERÀ SENIOR COHOUSING

COLLABORATIVE TOOLS

G22

Data gathering > Meetings with stakeholders
To determine their needs, desires and preferences.

C23
C24

Projective cartography > Users' needs (I): individual + Users' needs (II): collective
Habits are analysed as framed by daily schedule and spatial needs, and whether these take place individually or with a certain degree of collectivity.

D11

Design > Co-design workshops
To analyse needs, from which cartography derived. In addition, co-design workshops enabled a joint discussion between architects and dwellers.

E32
E35

Execution > User to execute + Collective assisted DIY-DIT
Residents executed carpentry tasks and built wooden furniture during construction stage, with the technical assistance of architects.

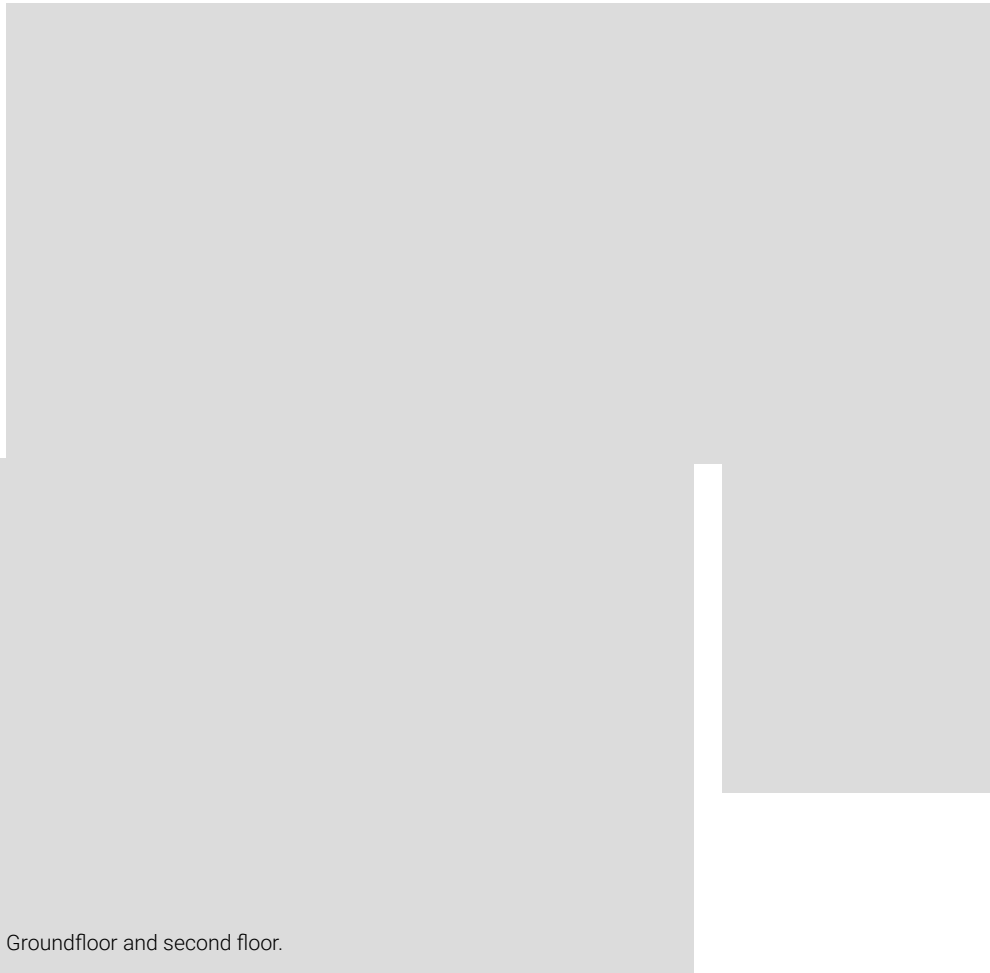
E33

Execution > User to complete
After occupation, residents completed the non-essential parts of the building.



Individual routines are represented, as well as an overview of all members. Each member is a concentric circle, colours represent activities: blue = sleeping; red = eating; orange = leisure; green and yellow = house-keeping. This allowed to extract clear conclusions about the expected use of the house.

W04 GUIMERÀ SENIOR COHOUSING

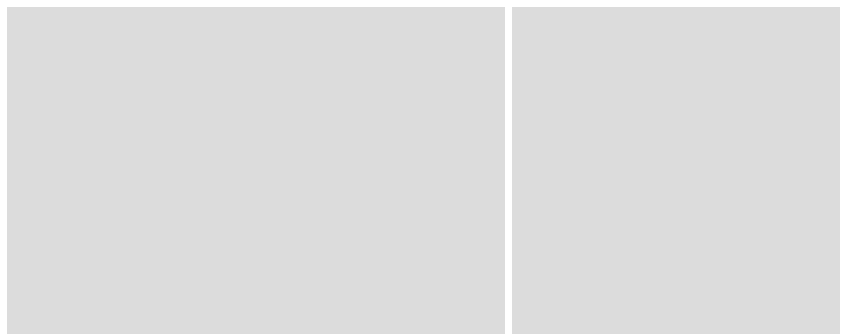


Groundfloor and second floor.

OUTCOMES

Guimerà exemplifies the design of a small cohousing unit, tailored for its users both in terms of the use of space – determined by an efficient analysis of their current and future needs and habits – and user engagement, evidenced by their active involvement in all the procurement phases. In this regard, the choice of rammed earth and wood for the construction fulfilled the requirements of both sustainability and execution. The engagement of users in the construction phase, given their skills and knowledge of wood construction, offered the potential for customisation, saving costs, as well as the challenge of coordinating the professional external work with self-built elements. The lack of an overall procurement body, such as a cooperative or a public procurement agency, translated into close collaboration between residents and technical staff, which was acknowledged by the architects to have been successful.

As explained by the architects in their account of the project, “our job as designers was mostly to guide the clients towards the schematisation of their living habits, within a community, and to transform that resulting diagram into a living space that would meet comfort and bioclimatic requirements. We had worked with the clients before, communication with them was fluent, and we can happily say the project reaches both our and their expectations”.



Building as inhabited.

More information:

www.arqbag.coop/guimera

<https://www.cma.cat/tv3/alcanta/planta-baixa/planta-baixa-el-tripartit-psc-erc-i-comuns-la-coalicio-preferida-dels-catalans-segons-el-cis/video/6100505> (minute 1:22:00)

Images: courtesy of Arqbag.

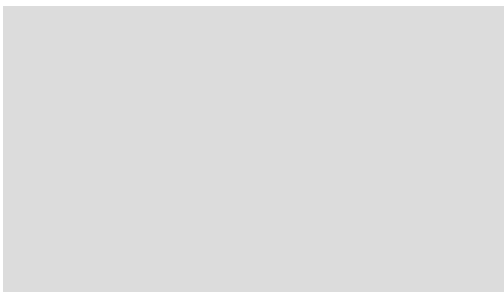
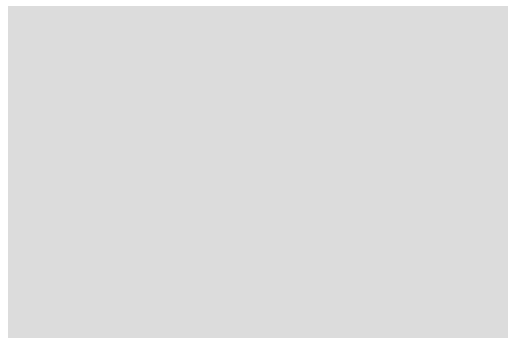
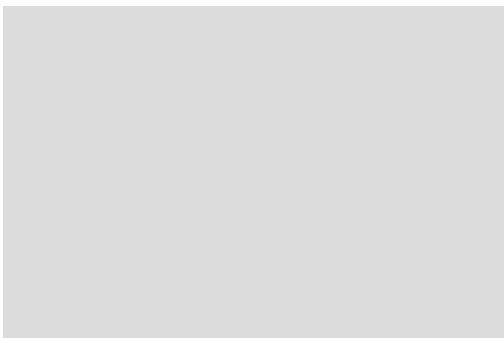
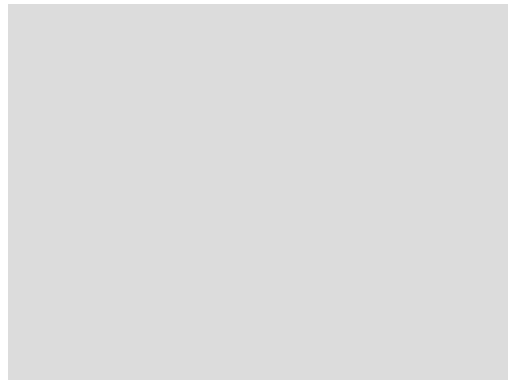
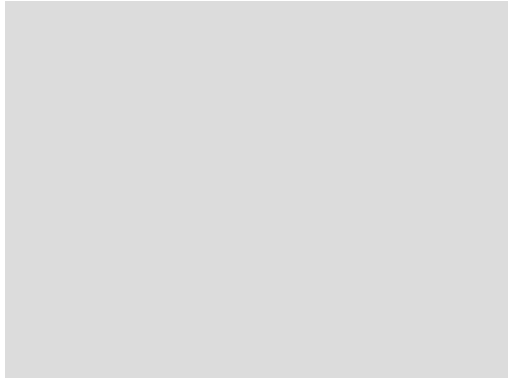
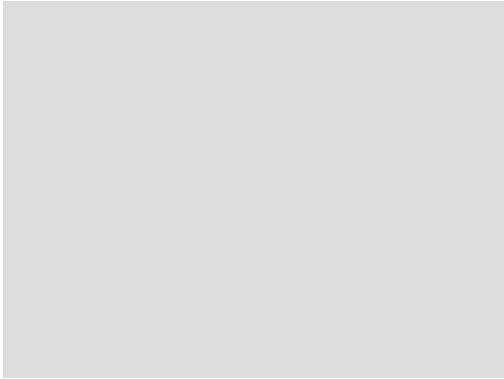
STAKEHOLDERS

Civic engagement	Neighbours of les Planes
Public administration	Sant Cugat del Vallès municipality, Departament de Medi Ambient i Participació, Cultura, Serveis Socials, Pla de Barris, Mútua Terrassa, Generalitat (SOC)
Community architects	ETSAV School of Architecture (UPC) Arqbag architects cooperative
Private	Residents of the refurbished houses (REC project) Fundació Engrunes, Testo, Akzonen, Sikkens, Grup Giró and Aislux, Applus+

CONTEXT & AIMS

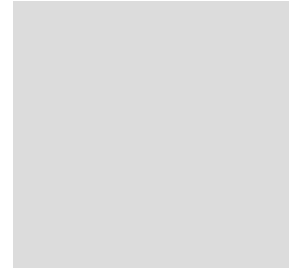
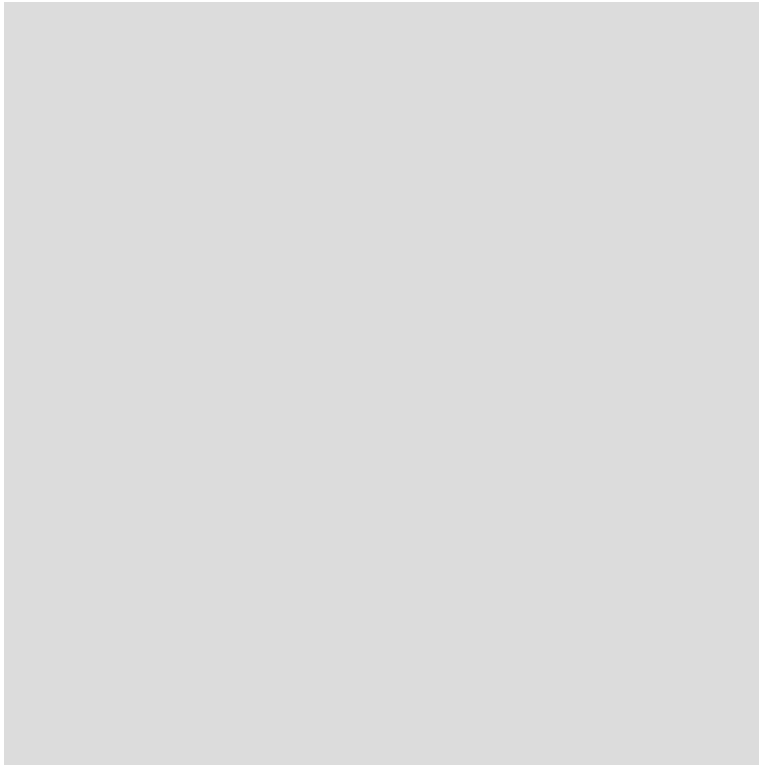
The Pas a Pas project consists of a sequence of interventions in an isolated hilly neighbourhood called les Planes, located in Sant Cugat del Vallès Municipality, in the Metropolitan Area of Barcelona. The interventions, developed over three years, included a Community Energy Refurbishment (REC; W06), the improvement of pedestrian accessibility (Ringo Rango Route; W22), a community centre ((e)co Platform; W14), and the improvement of an outdoor sports field (Espai Pere Grau; W15). All of these aimed to improve an area whose community was severely affected by the economic crisis after 2008, and suffered from energy poverty, a lack of public facilities and poor transport networks. Each of the four projects that Pas a Pas consists of entailed different approaches to the management of resources and the stakeholders involved, given the nature of the works developed.

Pas a Pas was made possible through the cooperation between academia, the municipality, and civic society. This involved, on the one hand, Vallès School of Architecture's (ETSAV) TAP-PUD studio, coordinated by Coque Claret, Dani Calatayud and Roger Tudó. TAP-PUD is strongly committed to architectural pedagogies based on a proactive student attitude, learning by doing, and citizen participation and training. On the other, it involved the municipality and public institutions linked to each of the projects. Finally, the local community proved to be highly engaged and included many different types of users: children, families, newcomers, organisations, educators, and in public facilities staff, all of whom can be participants in urban improvement interventions.



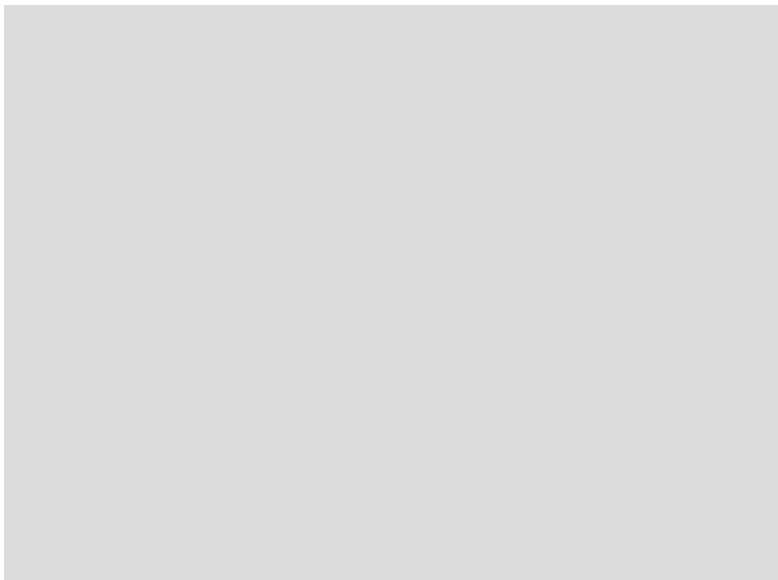
From top to bottom, left to right:
Les planes neighbourhood (two top images).
REC, Community Energy Refurbishment.
Ringo Rango Route, improvement of pedestrian accessibility.
Pere Grau Space, roof for an outdoor sports field (bottom right).
(e)co Platform (picture by Andres Flajszer).

W05 PAS A PAS LES PLANES



Stages of each project.

The identification of different stakeholders became crucial for the project's feasibility.



Digram of PAS A PAS different projects.

COLLABORATIVE TOOLS

The analysis of the process of Pas a Pas can be found in each of the projects sheets:

W06 Community Energy Refurbishment

W14 (e)co Platform

W15 Pere Grau Space

W22 Ringo Rango Route

OUTCOME

PAS a PAS created a Research-Action platform that linked the university with a specific neighbourhood and enabled technical support and assistance to be provided for three years, therefore contributing to an improvement in the neighbourhood. Four different projects were developed and executed, which included public space, public facilities, and housing energy refurbishment. Each of them entailed its own challenges and specific issues, which are analysed separately (REC W06; (e)co platform W14; Pere Grau W15; Ringo Rango Route W22). One of them, the (e)co Platform, next to the Pere Grau Space, operated as an on-site technical office and is currently a self-managed facility linked to a public civic centre. Each project was made possible by the success of the previous intervention and the strong relationship forged there. Projects were based on community trust and partnership with a wide range of stakeholders. The process also increased community cohesion and mutual support networks and in terms of the municipality it allowed them to achieve their goals through different means.

Pas a Pas evidences how self-organisation and intersecting partnership can achieve effective urban transformation projects that public administration cannot address – from housing energy refurbishment to public space and facilities. This project, based on connecting needs with opportunities and private, public and academic stakeholders, resulted in many positive outcomes beyond the execution of the projects, such as the strengthening of community networks, the training of residents in professional skills, and the education of architecture students.

More information:

Pas a Pas: projectepasapas.wixsite.com/pasapaslesplanes/inicio; @PasaPas Les Planes youtube.

Ruta Rinto Rango: rutaringorango.weebly.com

(e)co prototype: www.eco.upc.edu; www.arqbag.coop/prototip-eco; www.espaiecosantcugat.cat

Pere Grau Space: www.arqbag.coop/ambit-pere-grau; www.arqbag.coop/coberta-pistes
Images: courtesy of Arqbag.

See also the following MSc theses from ETSAV (Universitat Politècnica de Catalunya), available at: www.upccommons.upc.edu:

Colomé, B. (2014) *Millorem els habitatges de Les Planes: habitatge C/Carena, núm. 3*.

Burgaya, A. (2016) *Ringo Rango*.

Mihalache, A. (2016) *Rehabilitació energètica a Les Planes*.

Mitjans, J. (2014) *Millorem els habitatges de Les Planes (Sant Cugat del Vallès)*.

Pich-Aguilera, M. (2015) *Les Planes Resilient*.

Vilajoana, A. (2016) *Infraestructures col·lectives*.

COMMUNITY ENERGY REFURBISHMENT (REC)

Les Planes Neighbourhood, Sant Cugat del Vallès | 2014-2017

STRATEGICAL

PAS A PAS

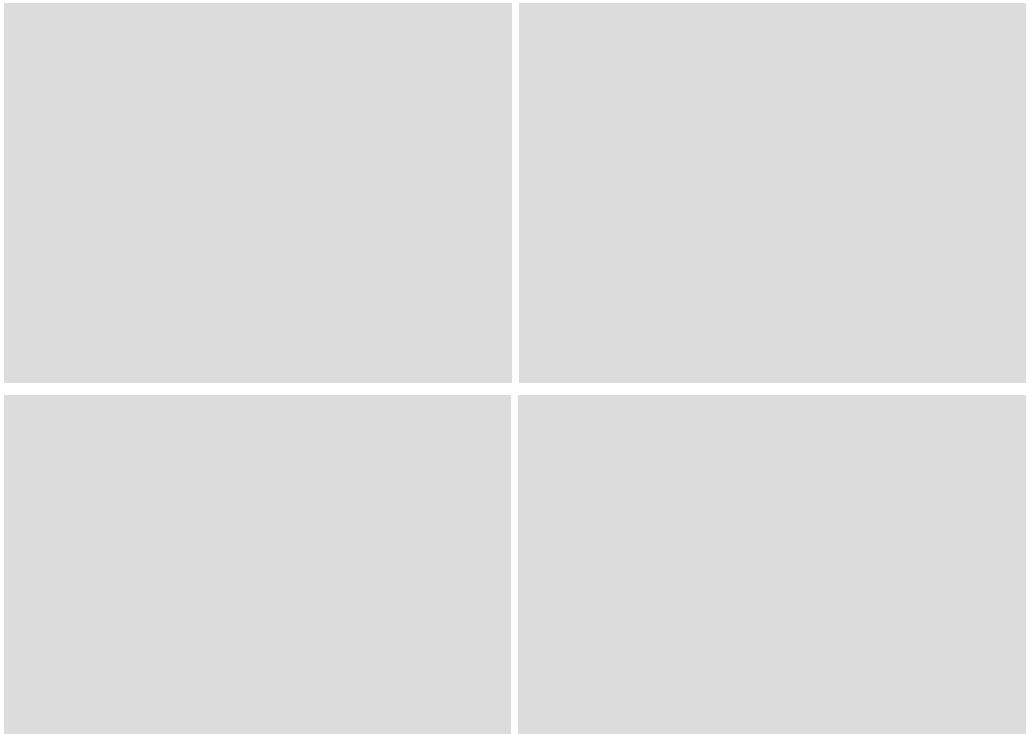
REC: Community Energy Refurbishment is part of Pas a Pas project in Les Planes Neighbourhood. See Stakeholders and Context & Aims description in Pas a Pas sheet (W05).

REC

The REC project (Community Energy Refurbishment) project addressed the problem of energy poverty in the neighbourhood of les Planes, within the Pas a Pas project (W05). The feasibility of REC became possible as a result of the synergy between different stakeholders and disciplines, where a number of public institutions, private companies and the university cooperated to improve six housing units. The first phase included the training of locals in construction skills through the Servei d'Ocupació de Catalunya, (SOC, Public Employment Service of Catalunya), with the aim of alleviating unemployment levels in the locality. These first works took place in the area of Pere Grau (W15). In the second stage, an analysis of the neighbourhood included architectural, social and sanitary reports developed by municipal workers and architects. Six homes were selected as the initial interventions to address the most urgent situations. The interventions were developed through micro-actions and focused on energy renewal and the improvement of living conditions: thermal insulation, increasing the use of passive solar systems, air quality control systems and window-frame waterproofing. The work was mostly undertaken by professional construction companies through Unemployment Plans, although some residents also participated. In addition, the project was financed by the municipality from savings gained from energy conservation in public buildings, and architects and ETSAV TAP-PUD studio students offered their time on a voluntary basis. In addition an anthropologist was appointed by the municipality as part of the Neighbourhood Plan (Pla de Barris).

OUTCOMES

The REC (Community Energy Refurbishment) project achieved its goals successfully: an improvement in the environmental conditions of housing units suffering from substandard conditions and, in doing so, training local people in construction skills to address the problem of unemployment. The environmental impact of the intervention was measured in three different ways. First, energy monitoring of the building before and after the intervention. Second, through a questionnaire completed by residents, evidencing an improvement in their perception of their wellbeing, in emotional, material and physical terms. Finally, the improvement in residents' health was documented, evidencing the potential of housing refurbishment as a preventative healthcare measure. The REC project makes its replicability at a larger scale possible. This situation raises several questions, including the public management of the operation, the non-dependence on voluntary work and a political discussion of the prioritisation of housing improvement as a preventative healthcare measure. In addition, it opens up the possibility of training both professionals and students.



Original condition, construction works and skylights as finished.



Domestic cartography of one of the houses
with descriptions of problems encountered.

W06

COMMUNITY ENERGY REFURBISHMENT (REC)

COLLABORATIVE TOOLS

- S13** **Stakeholders > Sociogram**
Identification of the different stakeholders involved and their relationships, be these public institutions, university, private sponsors, or users.
- M31** **Process management > Co-organise / develop with**
The project was only possible through the partnership of multiple stakeholders: ETSAV, Arqbag, municipality, and Pla de Barris (Neighbourhood Plan).
- G22** **Data gathering > Meetings with stakeholders**
A social analysis was developed in parallel to an architecture one, for which direct observation, meetings, group walks, and interviews took place.
- G11
C11** **Data gathering > Ethnographic observation + Projective cartography > drawing the domestic**
Domestic spaces were analysed through site ethnographic and technical observation. Data was represented in a domestic cartography.
- C16** **Projective cartography > Neighbourhood**
Social and morphological cartography were developed to discuss the framing analysis.
- C21** **Projective cartography > User portraits**
Specific knowledge of each users was gathered to know their specific needs.
- A21** **Analysis & Strategy > Financial analysis & co-finance strategies**
To guarantee the feasibility of the execution. Resources included sponsoring from private companies.
- D11** **Design > Co-design workshops**
Design was developed by architects, and approved by dwellers.
- Professional construction**
Works are mostly developed by professional construction workers through public employment training agency (SOC).
- E32
E35** **Execution > User to execute + Collective assisted DIY-DIT**
Although the project was mostly executed through professional construction, some of the dwellers also participated actively.
- P22** **Post-occupancy > Building monitoring**
Energetic performance was monitored before and after the intervention. In addition, medical results of a dweller with vitamin D before and after were compared and evidenced a positive impact.
- P33** **Post-occupancy > Process reports**
A results report was written at the end of the process. In addition, diploma projects of some Arqbag members are available in the UPC repository; see bibliography in Pas a Pas sheet (W05).

STAKEHOLDERS

Civic engagement/private	Residents of Guernika building
Public administration	CCCB Culture Center (Citizen's Technical Consultation Office)
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

CONTEXT & AIMS

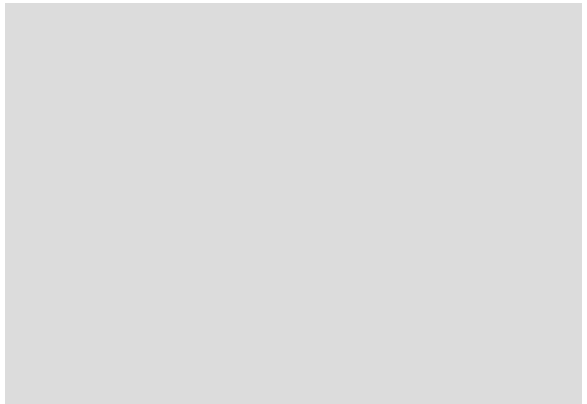
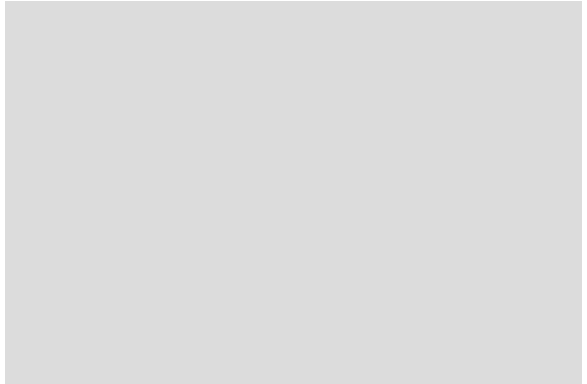
Lancaster, nicknamed "Guernika", is a project for the refurbishment of a squatted building in Barcelona city centre. The project emerged from the 2015 AC & Pei.Lab PUJ, who set up a Citizens' Technical Consultation Office within the framework of the Piso Piloto exhibition at CCCB (Centre de Cultura Contemporània de Barcelona), Barcelona.

In 2011, a group of people set up a squat in Guernika, aiming to support a project for migrant single mothers, but the poor condition of the building and the failure of the project resulted in sub-standard housing conditions. By 2015 Guernika was being squatted by a wide range of people, from single mothers to elderly people and families, whose common denominator was their urgent need for housing. The residents' idea was to rekindle a new project by gathering the community together again.

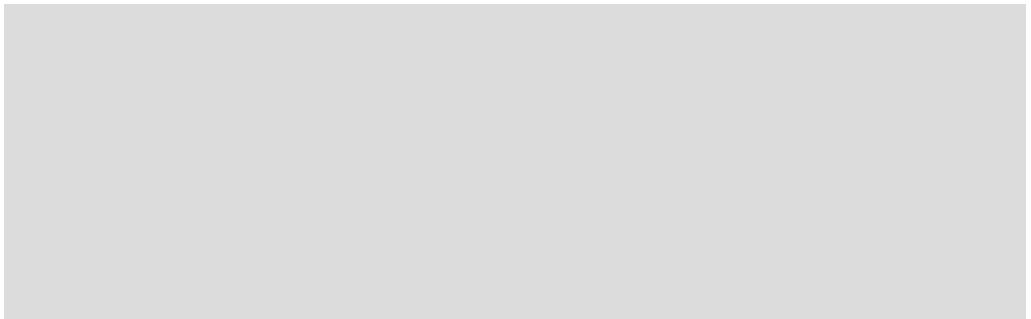
After the diagnostic analysis of the building and its residents, the architects concluded that there was an urgent need to improve the sanitary conditions of the building through refurbishment work. Mitigating the zero budget available for the project, the social cartography revealed that the community included residents with construction skills who were willing to improve the condition of the building themselves. Instead of a typical major one-off intervention of building refurbishment, the strategy was based on "microprojects": multiple small-scale actions that residents could execute over time according to their budget and available time.

The technical consultation included a report that mapped the existing conditions and building pathology, and a detailed plan of the interventions required, including the tools and human resources that were required and instructions to carry out the interventions. The microprojects included improving access to light and ventilation in the building, waterproofing the roof, and the installation of a solar-powered heating system.

In addition, the first intervention carried out by the architects and the community in the summer of 2015 consisted of transforming the ground floor space into a shared meeting area, with a window opening onto the street, and painting the façade and common areas.



Left: Sarah in front of Guernika. Top right: interior of the building. Bottom right: rooftop visit with residents.

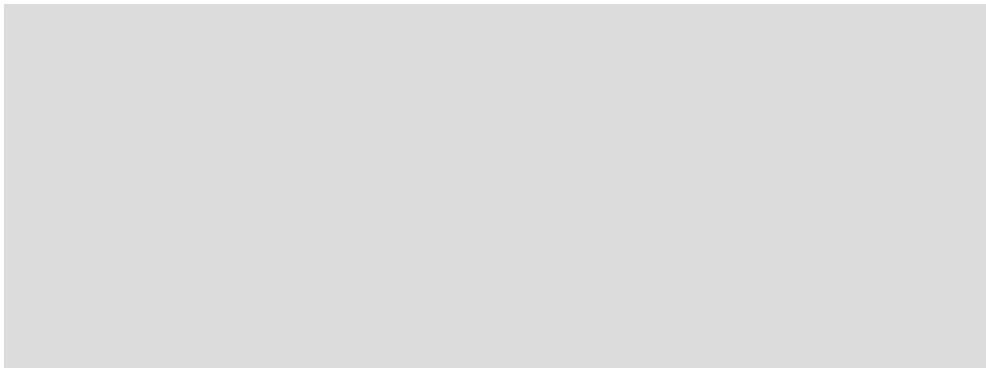


Guernika's new window in the groundfloor, which provided a collective meeting space.

W07 LANCASTER, "GUERNIKA"



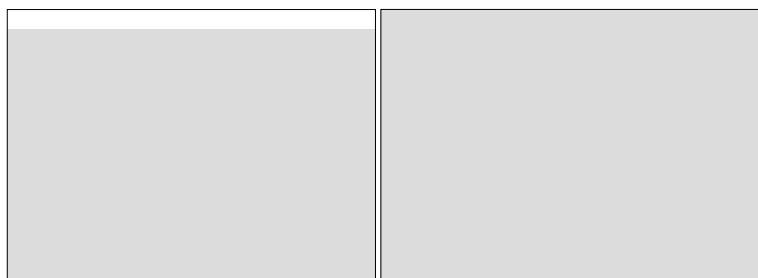
W. WORKS | HOUSING



Current aerial view (2021) of the void left by the guernika building.

COLLABORATIVE TOOLS

- G13** **Data gathering > On-site technical support office**
Arquitectos de Cabecera and Pei.Lab Javeriana de Bogotá offered a free architecture Citizen's Technical Consultation Office during the Piso Piloto exhibition in CCCB culture centre in 2015.
- S21** **Stakeholders > Direct invitation**
Architects invited Lancaster's residents to participate in the project, who allowed a cartographic analysis of their houses. Most of the residents decided to join the project.
- G11**
G22 **Data gathering > Ethnographic observation + Meetings with stakeholders**
Ethnographic research methods were employed in order to develop the cartography of the building and evaluate dwellers' living conditions, along with conversations with dwellers.
- C13** **Projective cartography > Building as socio-spatial ecosystem**
The socio-spatial cartography was crucial for setting this strategy, where not only building pathologies were identified but also residents' construction skills and availability.
- C21** **Projective cartography > User portraits**
A deep understanding of users' profiles and construction skills was crucial to develop a strategy based in mid-term non-assisted co-construction.
- D34**
E32 **Design > Split large interventions + Execution > User to execute**
Being a squatted building with no budget for intervention, technical staff proposed a number of microprojects detailing steps to be executed by dwellers. Instructions for each execution phase included details of material, time and investment, as well as comprehensible technical drawings.
- E35**
E41 **Execution > Collective assisted DIY-DIT + Generative actions**
During the workshop, a groundfloor space was transformed into a collective space. As crucial intervention, a window was opened in the groundfloor, improving the hygienic conditions.
- E31**
P33 **Execution > Technical specifications + Post-occupancy: Process reports**
Technical specifications were drawn so users could develop improvement works during post-occupancy according to their priorities and possibilities. A process report is available at www.arquitectosdecabecera.org.

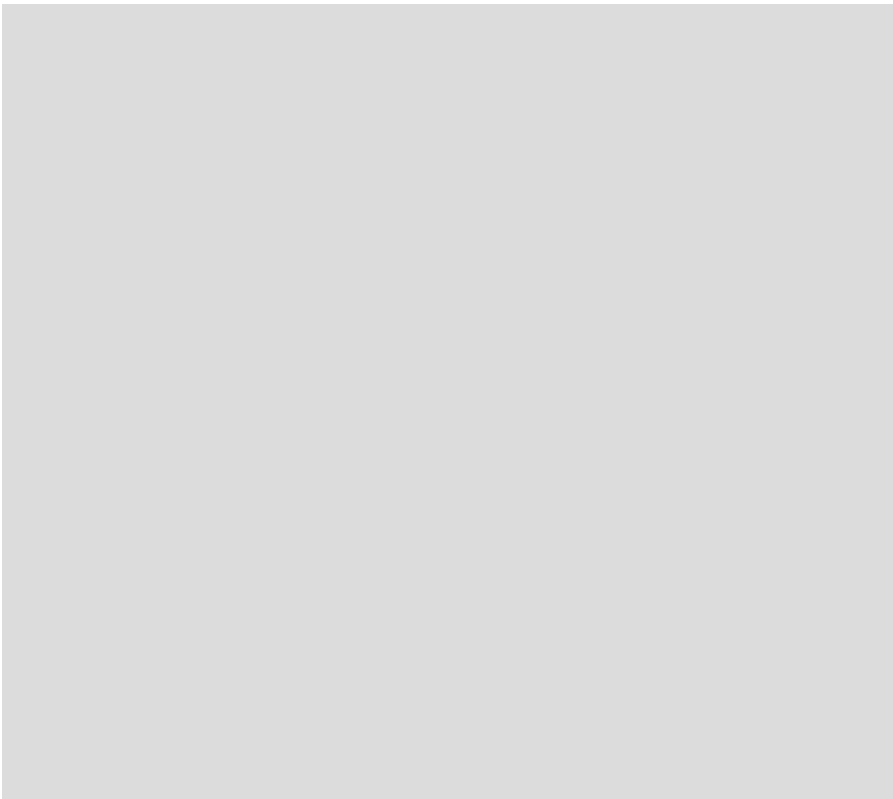
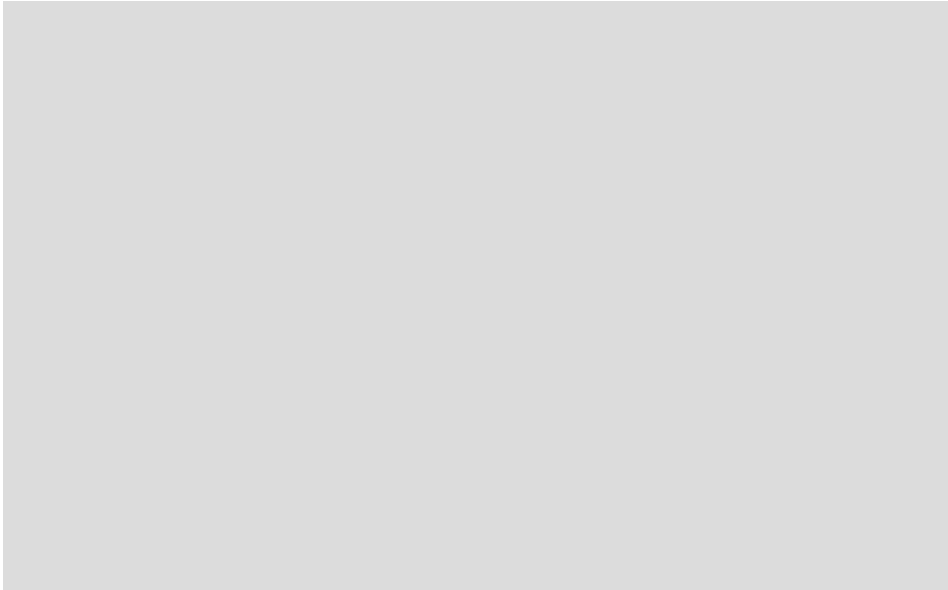


Pages from the technical report, analysing building construction deficiencies.



Pages from the technical report and microprojects.

W07 LANCASTER, "GUERNIKA"



W. WORKS | HOUSING

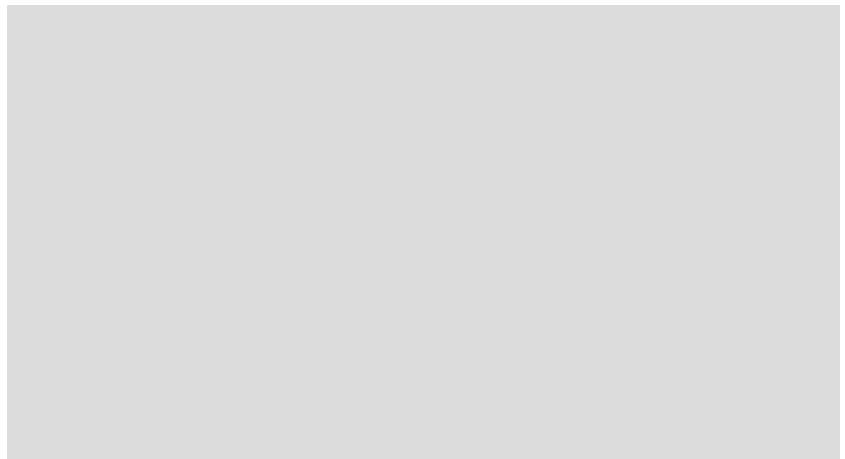
Building as an ecosystem: social (top) and spatial (below) cartography of Guernika. Knowing who inhabits the building was a crucial step to develop the strategy.

OUTCOMES

The number of visits to the office evidenced the need for a Citizens' Technical Consultation Office to address the everyday architectural problems that are overlooked by both the local municipal administration and professional architectural practices. Rather than being an exception within an architecture festival which is based on voluntary work, the existence of convenient, subsidised neighbourhood technical consultation offices would allow architectural advice to be offered as an effective public service.

The Guernika project became a successful short-term project but was a failure in the longer term. On one hand, the presence of students and the ground floor intervention increased trust in the project and acted as a catalyst for community cohesion. Within a few days, a community space was created on the ground floor of the building while architecture students' direct contact with urban problems had an impact on their education and their perception of their role as architects.

On the other, regarding the long-term impact, the refurbishment works planned in the technical report were never executed. Guernika was affected by a Pla de Millora Urbana (PMU, Urban Improvement Plan) from 2002 onwards, which proposed the demolition of the building. Despite all efforts and a slight improvement in living conditions, the threat of eviction discouraged residents from carrying out major improvements. In 2016 the Mothers L24 Collective was created to avoid eviction. In the years that followed, residents were relocated to public housing accommodation and Guernika was demolished.



Guernika ground floor community space with the new window.

More information:

www.arquitectosdecabecera.org/AC/en/portfolio/lancaster

Images: courtesy of Arquitectos de Cabecera.

STAKEHOLDERS

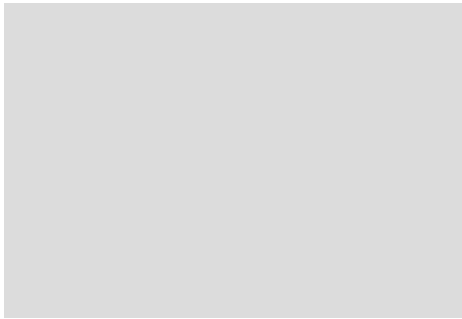
Civic engagement	Platform "Can Batlló és pel Barri", within which: "Strategy work group", in big scale and planning "Space Design work group" in warehouses
Public administration	Municipality of Barcelona
Community architects	Students of architecture (later Lacol)

CONTEXT & AIMS

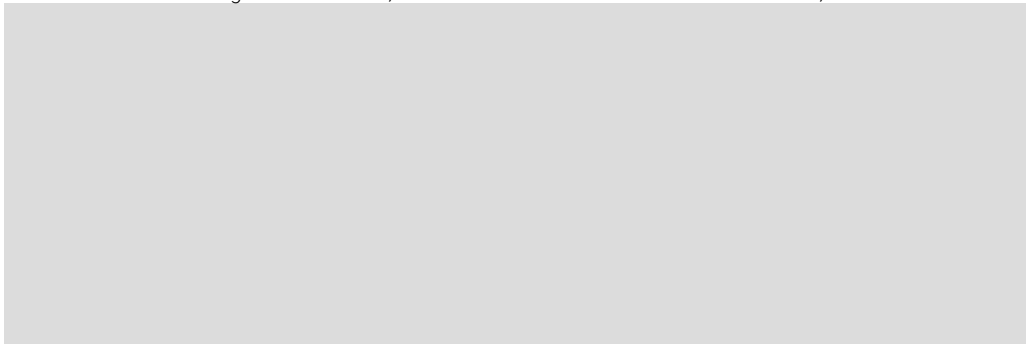
The Can Batlló premises, built in 1878 by textile industrialist Joan Batllo i Barrera, eventually became one of the biggest textile factories in Barcelona. Barcelona's 1976 Pla General Metropolità (PGM, General Metropolitan Plan), zoned the Can Batlló area for public facilities and green areas, but no significant transformation took place as a result, and the area gradually deteriorated and fell into disuse. The lack of public facilities and the undesired condition of a large walled area had been the cause of grassroots protests since the 1980s.

In 2009, protests over the state of Can Batlló intensified. Social protest movements started a media campaign and presented a two-year ultimatum to the municipality, "Tic-Tac Can Batlló", which coincidentally took place two months after the 15-M Movement in 2011 that had politicised wider sectors of the population and legitimised grassroots movements. A week before the deadline, and on Xavier Trias's first day as mayor of Barcelona, on 11 June 2011, the municipality agreed to the demands of grassroots organisations. Residents started by demolishing the perimeter walls, an operation that was completed by the municipality. In 2011, the municipality and the neighbourhood platform "Can Batlló és pel Barri" (Can Batlló is for the neighbourhood) reached an agreement by which part of the public space of Can Batlló would be managed by the platform to host self-managed facilities, the first of which was Warehouse 11. Successive administrations acknowledged the legitimacy of grassroots movements as a socio-political voice, particularly after the arrival of the municipalist political party Barcelona en Comú in 2015. The interventions into Can Batlló heritage followed a pattern of claim → construction → claim → construction, the first examples being Warehouse 11 (W09), other workshops, and Coopolis (W10), followed by the cooperative housing projects La Borda (W02) and Sotrac. Other projects are awaiting a permanent space, such as Arcàdia School (W11). In 2018, the platform became involved in the redefinition of the masterplan of the area.

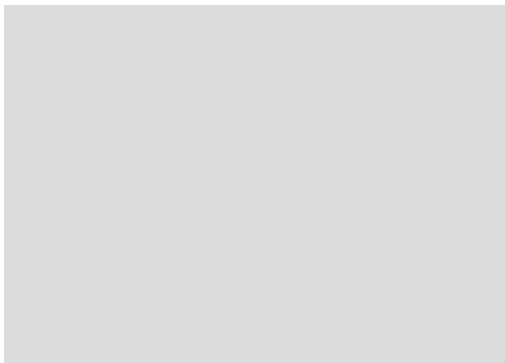
Today Can Batlló is managed through a monthly general assembly, weekly coordination meetings, several work commissions that meet regularly, and work cooperatives organised in four groups: these address respectively the internal structure; arts and crafts (arts, wood workshop, collective printing, mobility, audio-visual laboratory, craft school, beer workshop, sewing workshop); education and documentation (the Josep Pons Library, archival collections, and Arcàdia school), and cultural and leisure activities.



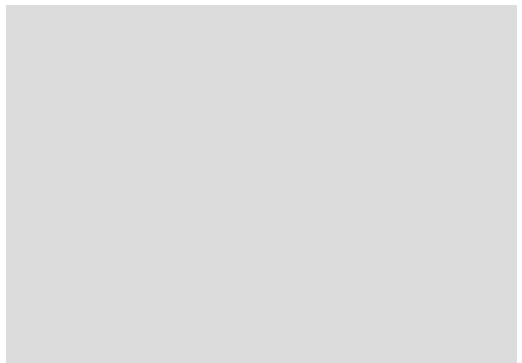
Can Batlló historical image. Source: Lacol, 2013. Demonstration in 2002. Source: Lacol, 2013.



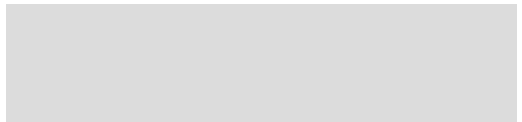
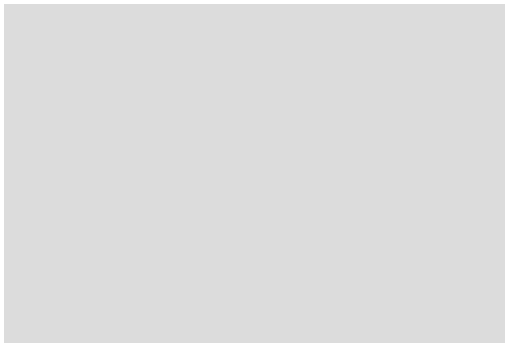
Can Batlló within Sants neighbourhood.



Demolition of the wall by neighbours with a painting of "Tic Tac can Batlló".



Social movements entering of the premises on 11th June 2011.



Neighbours assembly and recovery of warehouses, after 2011. Source: Lacol, 2013.

W08 CAN BATLLÓ COMPLEX

COLLABORATIVE TOOLS

Walled public land

Neighbours historical claims pressured the administration for both the need for facilities and green spaces, and the demolition of perimeter walls in a public-land large urban settlement.

E41
E43

Execution > Generative action + Do it anyway

After entering the premises and in front of the administrative inaction, the neighbours platform started the demolition of the perimeter wall of Can Batlló, after which the municipality demolished the rest.

M31

Process management > Co-organise / develop with

The platform and municipality reached an agreement for the cession and transformation of warehouses for self-managed facilities; Warehouse 11, Coopolis and Arcàdia are analysed separately.

G22

Data gathering > Meetings with stakeholders

The "Strategy work group" of the assembly met the administration district department, urban planning, and neighbours. Invitations for the general assembly were printed in billboards and posters.

S41
S42

Stakeholders > Collaboration with external events + Printed media

A Heritatge Conference was organised in order to claim the preservation of the warehouses and gain social support. Lacol co-developed the documentary "Com un Gegant Invisible".

C16
C35

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

A11
A31

Analysis & Strategy > The (yellow) manifesto + Strategic action plan

The assembly of Can Batlló, through work groups, defined guidelines and set a strategy of use of warehouses to fit social initiatives.

E11

Execution > Do not do (I): maintain

In front of material scarcity, the intervention in warehouses such as the print house workshops were minimized. The interventions in Warehouse 11 and Coopolis are analysed separately.

D41
D43

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

The "meanwhile condition" as defined by planning (developed but not applied) allows to develop the area without a strict application of regulations nor building permits.

D51

Design > Reclaiming empty plots

After the first intervention in Warehouse 11, the Platform started claiming for more spaces in empty warehouses to accommodate workshops and other activities.

Exterior works executed

Designed by Batllo & Roig architects and executed professionally, the exterior areas of Can Batlló were conditioned as public space with minimum interventions.

D11
D12

Design >Co-design workshops + Proposing an alternative

In front of an unsatisfactory masterplan proposed by the previous private owner, the assembly led the redefinition of Can Batlló masterplan, which included workshops open to the neighbourhood.

P21

Post-occupancy > Post-occupancy technical support

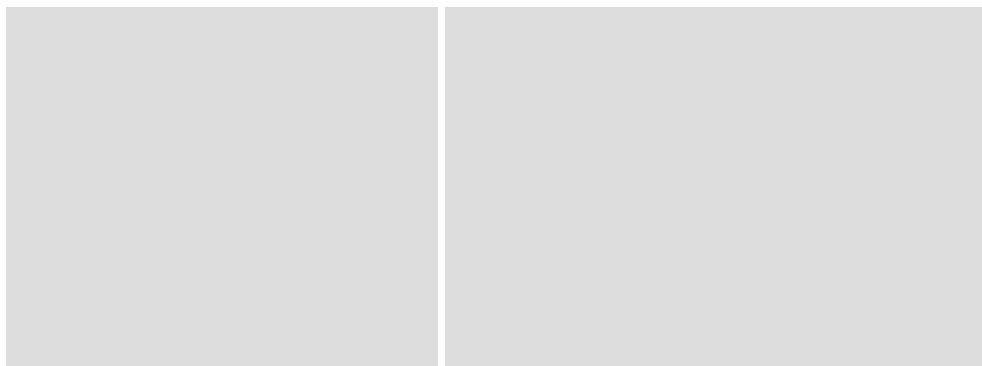
Architects are linked to Can Batlló general assembly, and are part of different social initiatives that take place in Can Batlló, such as Coopolis or la Borda.

P33

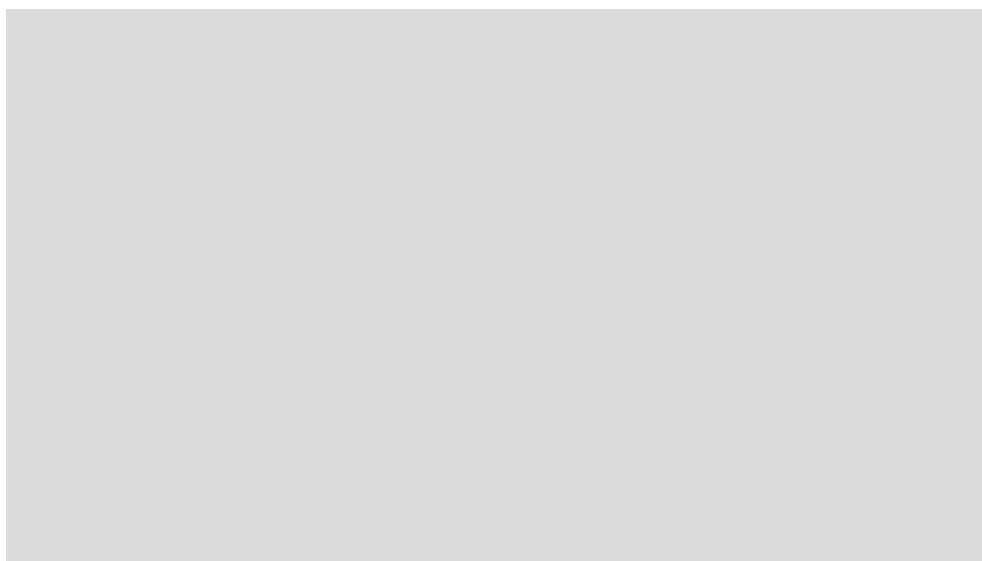
Post-occupancy > Process reports

The "participative process of Can Batlló Park" led by the Platform, with workshop attendance between 75-200 people, was reported. Available at the municipality website: ajuntament.barcelona.cat. The masterplan is still in the development phase.

W08 CAN BATLLÓ COMPLEX



Left: poster of the Heritage Conference on 30th April 2011. Right: neighbours assembly in Warehouse 11 around a plan of Can Batlló complex in 2012. Source: courtesy of Lacol.



Images from Can Batlló masterplan definition: analysis workshop, general plan of uses and neighbourhood assembly in the auditorium of Warehouse 11, 2018. Source: Can Batlló and Lacol, 2019.

OUTCOMES

Celebrated by social movements as a historic victory, Can Batlló represented the shift from “planned degradation” as part of a profit-driven strategy resulting from a liberal agenda with the support of the municipality to a “community construction” (Dalmau, 2014). Can Batlló exemplifies the need for social movements to have a physical space to gather – to organise – but also for areas of non-institutionalised control, managed autonomously by the public administration.

Can Batlló became a catalyst for community cohesion among a very heterogeneous social group (consisting of more than 500 people belonging to many different associations and groups from the Sants neighbourhood) that was challenging a private developer and defending a self-managed collective facility. Over the years Platform Can Batlló acquired the lease for more warehouses and developed numerous activities and workshops in a self-managed organisation that was intentionally independent of the administration. In 2015 the Associació Espai Comunitari i Veïnal Autogestionat de Can Batlló (Self-Managed Communal and Neighbourhood Space of Can Batlló Association) was constituted, and in 2019 the Municipality of Barcelona leased the space for fifty years to the collective through the “Citizen Heritage” formula, developed for community management (Citizen Assets programme, 2017). These professional activities, in complementing voluntary commitment, are a tool to keep Can Batlló active and were validated through economic, social and communal viability requirements.

Can Batlló became a stepping stone in the administration's acknowledgement of the legitimacy of grassroots activism. It also exemplified political involvement by architects, who not only offer design services but are active as part of social movements: Lacol formed part of the Can Batlló working groups for Space Design and Strategy, still active today, which address the evolution of the community project in relation to planning.

More information:

Panóptica and Lacol (2011) 'Com un Gegant Invisible' (documentary). Barcelona. Available at: <https://vimeo.com/82442928>, with english subtitles.

Baiges, C. (2015) 'Can Batlló: cuando la ciudadanía reutiliza el patrimonio industrial'. *Butlletí d'Arqueologia Industrial i de Museus de Tècnica i Ciència*, pp 2-6.

Can Batlló and Lacol (2019) *Memoria del Procés Participatiu Parc de Can Batlló*. Report of the co-design process for Can Batlló park, including detailed description of the different workshops. Available at: ajuntament.barcelona.cat.

Castro, M., Gual, J. M., Martí-Costa, M. and Martínez, R. (2011) 'Can Batlló: Construir comunidades en las ruinas de la crisis' in *Jornadas contra la Depredación de los Bienes Comunes*.

Dalmau, M. (2014) 'Can Batlló: de la degradación planificada a la construcción comunitaria'. *Quaderns-e*, Vol. 19 (1) Available at: dialnet.unirioja.es.

Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

www.canbatllo.org

Images: courtesy of Lacol and canbatllo.org, unless otherwise stated.

STAKEHOLDERS

Civic engagement	Platform "Can Batlló és pel Barri", and its "space design" and "infrastructure" work groups
Public administration	Barcelona Activa (municipal company for professional training) Municipality of Barcelona, cession of the space
Community architects	Students of architecture (later Lacol)

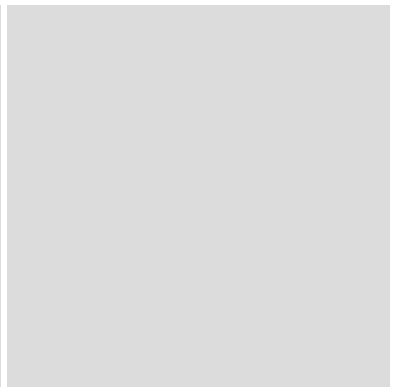
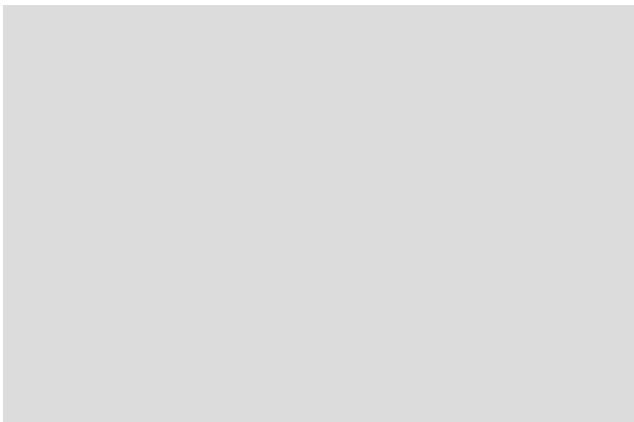
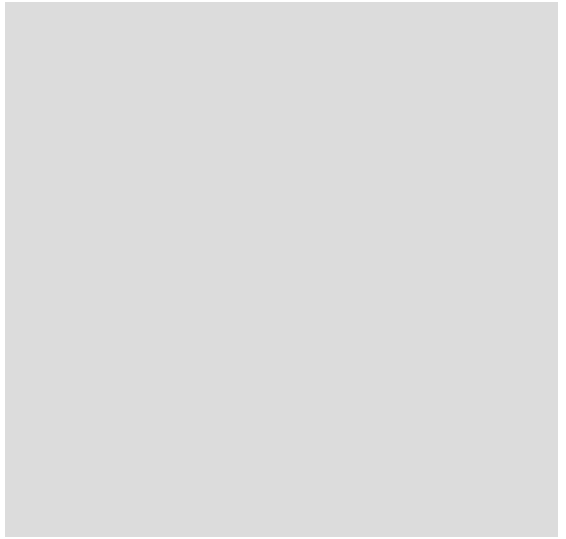
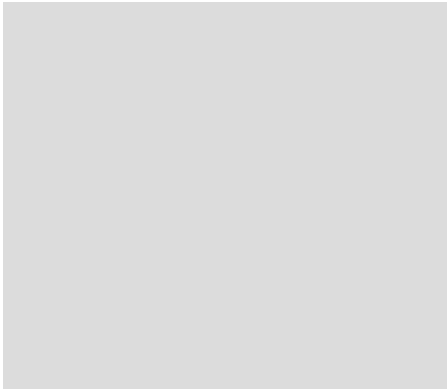
CONTEXT & AIMS

Warehouse 11 (W11) and Coopolis warehouse (W10) are two of the spaces self-managed by neighbours as part of the recovery of the Can Batlló complex (W08) as a self-managed cooperative cluster facility. Both interventions took place consecutively and address similar challenges – i.e., how to refurbish a publicly owned and self-managed facility with few available resources.

Warehouse 11 was the first intervention in the Can Batlló complex after its opening in 2011. The agreement with the municipality to lease the warehouses included the stipulation that the infrastructural work and essential maintenance were the responsibility of the municipality and Barcelona Activa, the public institution for professional training, whereas the neighbourhood platform of Can Batlló had to provide the means to make the spaces suitable for use.

The ground floor hosts the popular self-managed Josep Pons Library, an auditorium and a meeting space, while on the first floor there is a climbing wall and meeting and exhibition spaces. The refurbishment work was carried out on a voluntary, self-build basis, with recycled materials and donations from local residents, including the library's book collection.

Professionals from different disciplines supported the project, from bricklayers to lawyers, during the negotiations with the municipality and the self-building of the space. They included a group of architecture students that went on to form the Lacol architects' cooperative some years later: they provided technical assistance and actively participated in construction work. As part of the recovery of the Can Batlló warehouse and its history of craft production, a carpentry workshop – as a workers' cooperative – was installed in one of the warehouses: this played a key role in the refurbishment of the warehouse complex.



Warehouse 11 meeting space.

W09

CAN BATLLÓ
WAREHOUSE 11

W. WORKS | FACILITY

Neighbours' assembly.

COLLABORATIVE TOOLS WAREHOUSE 11 (2012-13)

**M31
D51**

Process management > Co-organise / develop with + Design > Reclaiming empty plots

An agreement with the municipality allowed to develop a self-managed facility of public interest in an unused publicly-owned warehouse in Can Batlló Complex. The agreement included the definition of responsibilities: infrastructural construction works to the municipality and conditioning of the space by the Platform Can Batlló, managed through an assembly.

**S21
S42**

Stakeholders > Direct invitation + Printed media

Stakeholders and neighbours were reached through seduction (printed and digital media campaign) and via making the process visible.

**G12
G21**

Data gathering > Group walk + Diagnostic workshops

Collective on-site group discussions and assemblies allowed to examine the premises, closed for decades, and discuss about its optimal use.

**C16
C35**

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

A22

Analysis & Strategy > Available resources (I): inventory

An inventory of available materials and resources in Can Batlló was created.

D11

Design > Co-design workshops

With Can Batlló general assembly and its "Space Design work group".

D32

Design > Leveraging material scarcity

Design was developed considering existing limited and gathered materials.

**D41
D43**

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

The 'meanwhile' condition as defined by planning (developed but not applied) allowed to develop the area without a strict application of regulations, nor building permits.

E22

Execution > Recycling & reclaiming components

Some elements were built reusing materials of Can Batlló.

E35

Execution > Collective assisted DIY-DIT

Assisted self-construction of elements with the support of technical teams.

P21

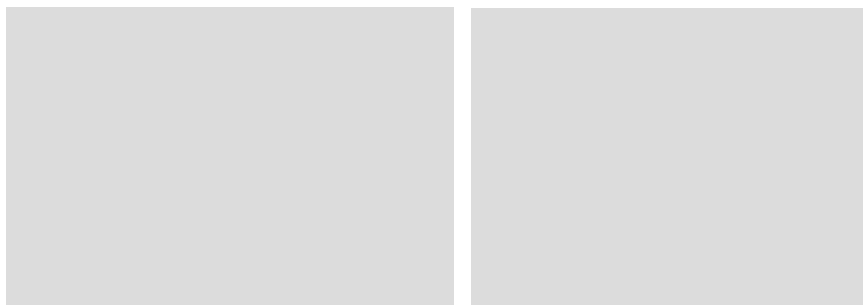
Post-occupancy > Post-occupancy technical support

Architects were involved in the gradual construction of the different parts of Warehouse 11 and its post-occupancy.

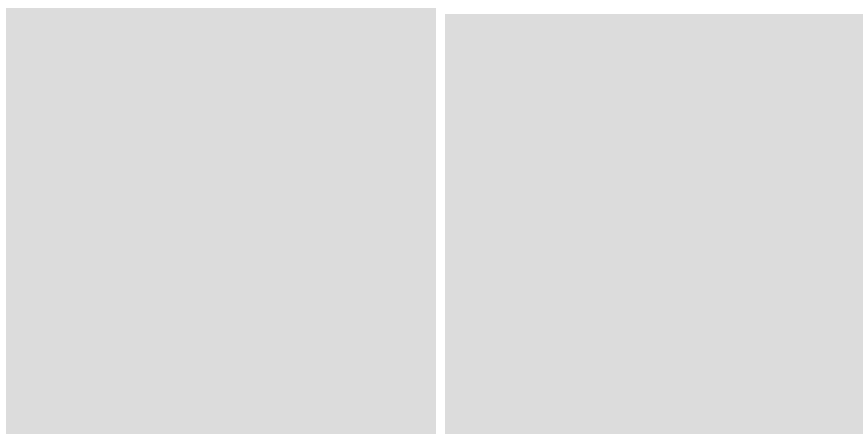
W09

CAN BATLLÓ

WAREHOUSE 11



Warehouse 11 self-construction.



W. WORKS | FACILITY

Warehouse 11: bar area and the Popular Library Josep Pons.

OUTCOMES

Warehouse 11 became a tactical operation to reclaim a space for the community in Can Batlló for social and meeting purposes, from which many other activities and working groups could be organised.

Warehouse 11, as a neighbourhood grassroots platform space, evidences residents' need to have self-managed spaces for gathering and organisation that can have a broader impact, as exemplified in the implementation of several neighbourhood initiatives that emerged from Can Batlló after 2011, including la Borda cooperative housing (W02), Coopolis (W10) and Arcàdia School (W11).

Warehouse 11 demonstrates the potential of a multi-stakeholder partnership: the municipal government, Barcelona Activa as a public training agency, the Can Batlló grassroots movement and its residents, and Can Batlló carpentry workshop as an autonomous initiative within Can Batlló. Warehouse 11 is evidence of the capacity of self-managed residents' organisations to manage public space and develop and consolidate neighbourhood activities. In other words, to implement activities which are of public interest in form and content but are not under the control of the municipality's political agenda in either respect. From the point of view of the administration, Warehouse 11 became an example of community-led transformation and management of a public facility, although developed with significant voluntary effort. As discussed in the case study of Coopolis (W10), the subsequent intervention in the warehouse included a higher input of professional construction work.



Detail of the library door, built with recovered material.

More information::

www.lacol.coop/projectes/bloconze-can-batllo

www.lacol.coop/projectes/connexio-vertical-bloconze

www.urbannext.net/bloconze-can-batllo

www.canbatllo.org

www.economiasocial.coop/ateneus-cooperatius

Images: courtesy of Lacol. Photographs by Lacol and Joan Massagué.

STAKEHOLDERS

Civic engagement	Coopolis Can Batlló neighbourhood association
Public administration	Municipality of Barcelona, cession of the space
Community architects	Lacol cooperative of architects
Technical staff	Fusteria de Can Batlló SCCL, Arkenova SCCL, M7 Enginyers, Societat Orgànica SCCL and Aumedes DAP

CONTEXT & AIMS

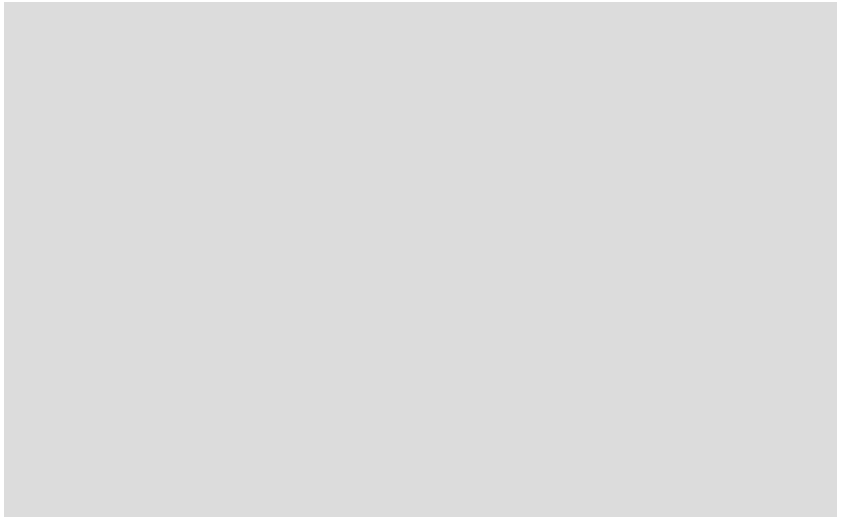
Coopolis is one of the series of warehouses consecutively refurbished in Can Batlló (W08). Work on Coopolis took place after Warehouse 11 (W09) was completed.

'Coopolis' refers to both the name of an institution and a space; a self-managed facility that aims to promote cooperativism and the Social and Solidarity Economy (ESS). Coopolis as an institution has become crucial as a legal entity, as one of the fourteen Ateneus of the Xarxa d'Ateneus Cooperatius (Network of Cooperative Ateneus), promoted in 2016 by the Catalan government with the program Aracoop, which aims to achieve a regional impact in the Social and Solidarity Economy (ESS) by offering technical assistance for cooperatives of all kinds.

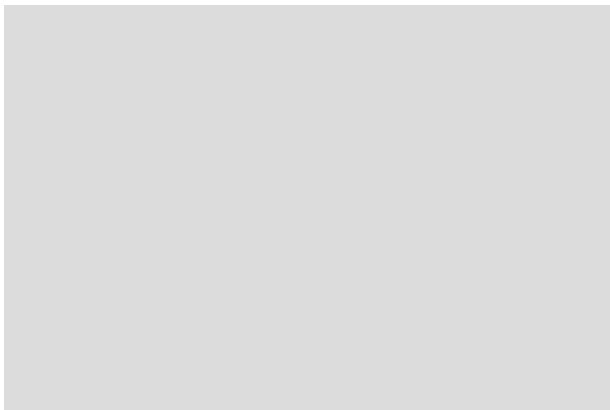
Coopolis is temporarily based in Warehouse 8 in Can Batlló, built in 1880; there are plans to move it to another warehouse in the same complex in the future. An agreement with the municipality included the leasing of the space to the Can Batlló neighbourhood platform in order to develop a self-managed public service facility. The project was financed with public funding and built through a collaboration with Can Batlló's carpentry workshop cooperative.

Refurbishment of the warehouse started in 2017 with a tactical phase 0 that aimed to make a minimum space usable by building a wooden box in the warehouse and undertaking minimum adaptation of other spaces. This allowed the space to be used immediately, while the rest of the intervention was being planned and executed. In 2019 a larger-scale intervention took place in the rest of the warehouse with the construction of office and meeting spaces, also constructed in wood. Both interventions aim to make the historical heritage of Can Batlló visible through careful intervention and a minimal use of energy in both construction and post-occupancy phases. In designing a wooden building within a historical building, different areas of thermal comfort allow energy to be controlled efficiently. In addition, given the temporary character of the intervention, wood construction will be easy to disassemble and potentially transport to another location.

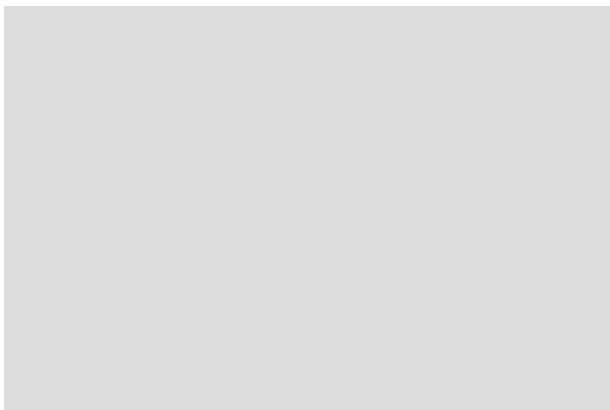
It is expected that Coopolis will move to a permanent space in the future in another warehouse.



Coopolis as part of a territorial structure of Ateneus. Source: www.coopcatcentral.cat.



Coopolis warehouse in first term. Behind, the biggest warehouse in Can Batlló, which is planned to become the Barcelona Archive. Source: www.bcn.coop. Image by Lacol.



Coopolis warehouse before transformation. Source: www.bcn.coop.

W10

CAN BATLLÓ

COOPOLIS PHASE 0

W. WORKS | FACILITY

COLLABORATIVE TOOLS COOPOLIS (2017 & 2019)

**M31
D51**

Process management > Co-organise / develop with + Design > Reclaiming empty plots

As in the case of Warehouse 11, an agreement with the municipality allowed to develop a self-managed facility of public interest in an unused publicly-owned warehouse in Can Batlló. In this case, the municipality was responsible for construction works, which were developed by "Can Batlló Wood workshop".

**C16
C35**

Projective cartography > Neighbourhood + Memory

A research on the history of Can Batlló was published: Lacol (ed.) (2013) *Inventari de Can Batlló. Teixint una història col·lectiva*. Barcelona: Riera de Magòria.

D11

Design > Co-design workshops

Architects met with the technical teams of Coopolis to develop the design of the space.

D31

Design > Intermediary situations: "the meanwhile"

A phase 0 was developed to start using the space before larger investment. Two interventions took place in 2017 and 2019, and it is planned to move Coopolis to another warehouse in the future.

D32

Design > Leveraging material scarcity

Construction system considered the economic and environmental impacts.

Professional execution

Construction works took place professionally. Wood interventions were developed by Can Batlló Wood workshop (a workers cooperative), located in one of the warehouses of the complex.

E23

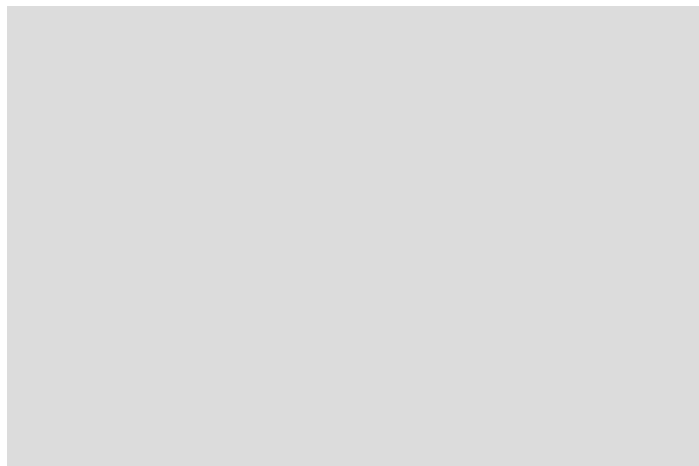
Execution > Dismantling & reassembling buildings

Foreseeing a potential future dismantling, wood construction was chosen.

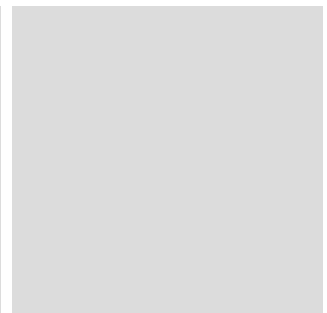
P21

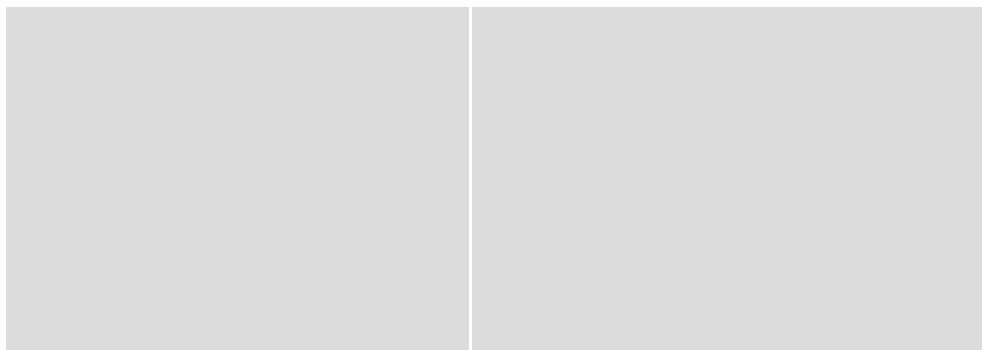
Post-occupancy > Post-occupancy technical support

As part of the implication of the team of architects with Can Batlló.



Coopolis first intervention in 2017.

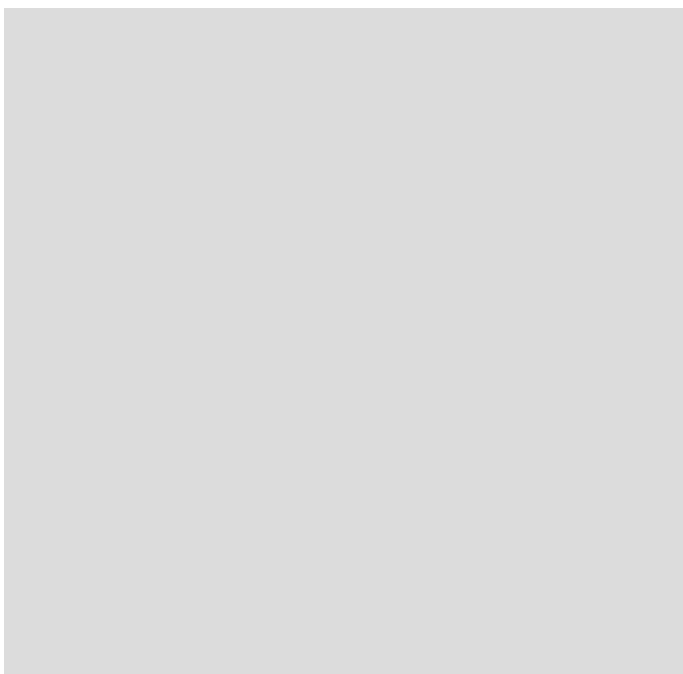




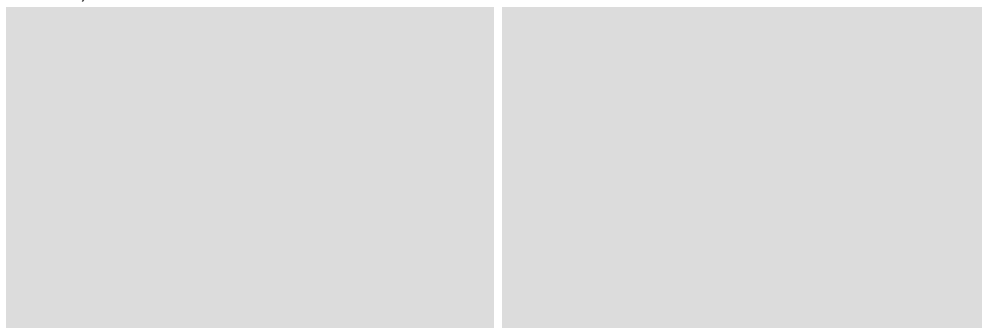
Phase 0, 2017.

2019

2017



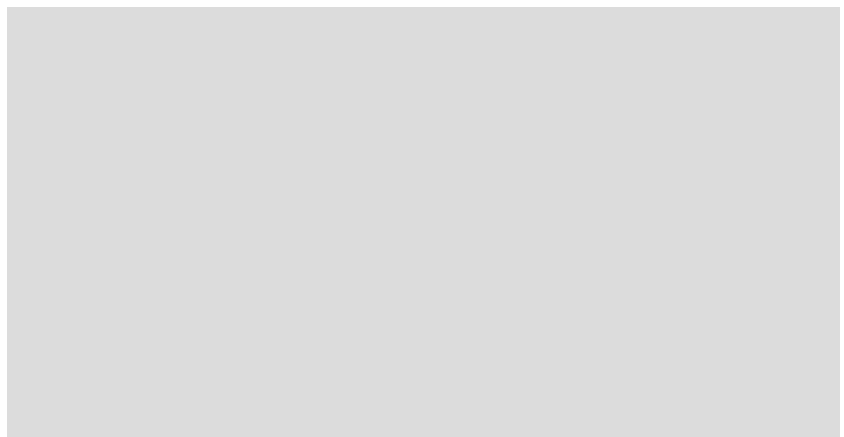
Phase 1, 2019.



OUTCOMES

After the Warehouse 11 experience (W09), Coopolis gradually included and involved more professional expertise in the refurbishment of the Can Batlló premises. This provided more resources, as well as making it less dependent on voluntary work, which is often exhausting. In addition, the fact that the wooden construction was developed in the Fusteria Can Batlló ("Can Batlló Carpentry Workshop" had a positive impact on Can Batlló's cooperative structure. The public investment included construction work but not management, which was retained by the Can Batlló neighbourhood association. Along with other facilities, such as Ateneu Popular 9 Barris in Sant Andreu neighbourhood, self-managed since 1977, Coopolis represents an important moment in the municipality's understanding of the public provision of services, financed through public funding but retaining autonomous management.

The refurbishment of Coopolis is evidence of the successful strategy of splitting a larger intervention into consecutive phases. In the first phase, in 2017, a tactical intervention enabled the space to be used immediately, with a minimum transformation, without having to wait for two years until the next phase was executed. The second intervention is more complex in terms of construction and size; however, the same building criteria were applied. The fact that both are built with wood is an optimal response to the meanwhile condition of the warehouse before Coopolis is located in a new setting, allowing the construction to be dismantled for transfer to a new location, as well as minimising the need for permanent intervention in the warehouse after this.



Coopolis is expected to be moved to another warehouse of Can Batlló, Warehouse 4, in the future. Axonometry of the feasibility studies of Lacol for the new Coopolis location.

More information:

www.lacol.coop/projectes/coopolis-bcn-fase-0

www.lacol.coop/projectes/coopolis-espai-leconomia-social-progres

www.bcn.coop

www.canbatllo.org

Images: courtesy of Lacol. Photographs by Lacol and Alvaro Valdecantos.

STAKEHOLDERS

Civic engagement	Arcàdia school Can Batlló neighbourhood association
Community architects	MUT Collective, formed by self-organised undergraduate students of ETSAV Vallès School of Architecture
Technical staff	Jordi Mitjans, Coque Claret, Amadeu Santacana and Martí Obiols (ETSAV faculty, advisors) BAM BioArquitectura Mediterrànea, for construction with canes

CONTEXT & AIMS

Arcàdia school, a self-managed educational initiative that emerged from Can Batlló as an alternative to conventional state-run educational systems, needed a larger space for both indoor and outdoor activities. However, the long-term plan is to make a permanent intervention in one of Can Batlló warehouses. The MUT team consists of 18 students of architecture from ETSAV School of Architecture, organised around a general assembly and working groups. MUT's intervention was defined as a temporary improvement under a meanwhile condition before the school relocated. The architects collaborated closely with Arcàdia in order to define their needs and match them with the realistic possibilities offered by a tight budget.

The process lasted 18 months and was interrupted by the Covid-19 lockdown in Spain from 15 March to 21 June 2020. The lack of funding was addressed by working with partners and available resources: borrowing tools from Can Batlló and ETSAV, reusing materials, looking for sponsors, and a crowdfunding campaign.

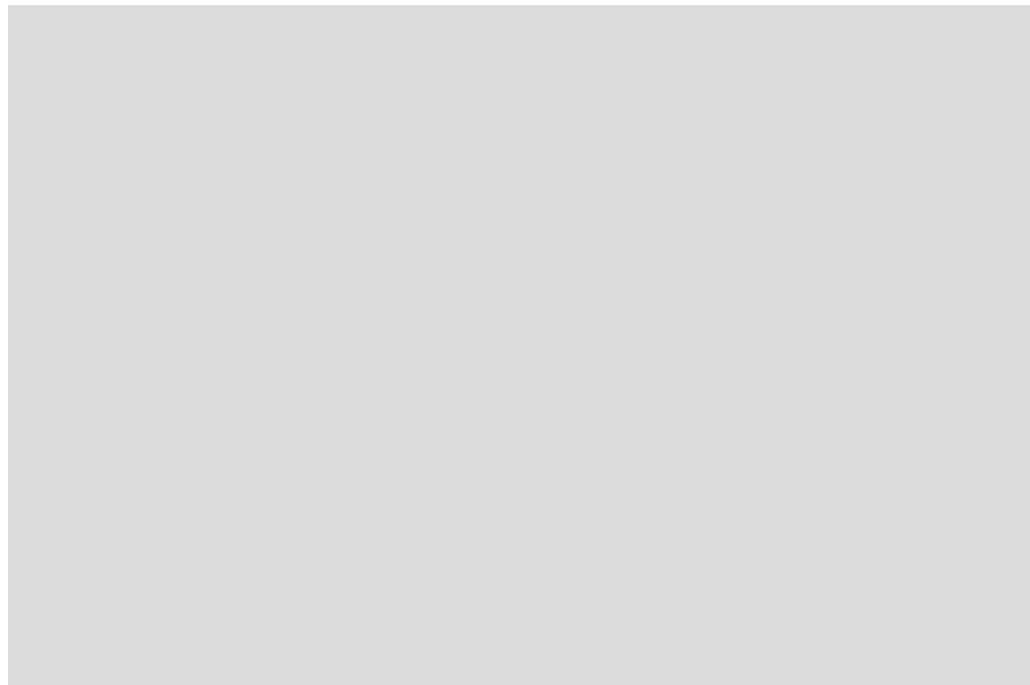
With a budget of almost zero, the intervention took place in the outdoor space in the summer of 2020: playground areas were built with recycled tyres and cane (*Arundo donax*), in collaboration with BAM Bio Arquitectura Mediterrànea association.

Finally, the refurbishment of the indoor space and the exterior gallery took place in the summer of 2021, enabling the school to start using the premises at the start of the 2021 school year.



MUT and Arcàdia meeting.

Axonometry and as built.



COLLABORATIVE TOOLS

M33

Process management > Discussion workshops

Discussions of needs and strategies took place between architects and Arcàdia school.

**A21
S47**

Analysis & Strategy > Financial analysis and co-finance strategies + Stakeholders > Video

A work group looked for sponsors and developed a crowdfunding campaign, in which a promotional video (www.youtu.be/OrxhyCic_0Q) was included.

A23

Analysis & Strategy > Available resources (II): "harvest map"

Can Batlló as a complex with several abandoned warehouses became an excellent field for recycling materials. A "harvest map" was developed, along with a catalogue of found materials.

D23

Design > Enabling: adaptable system

The indoor space is thought as an enabling surface with mobile artefacts that allow different uses.

D31

Design > Intermediary situations: "the meanwhile"

It is planned that Arcàdia school will have a new refurbished space in one of Can Batlló's warehouses. However, until this can take place, an improvement of existing conditions is needed.

E21

Execution > Borrow - barter

Tools were borrowed from ETSAV School of Architecture and Can Batlló complex.

E22

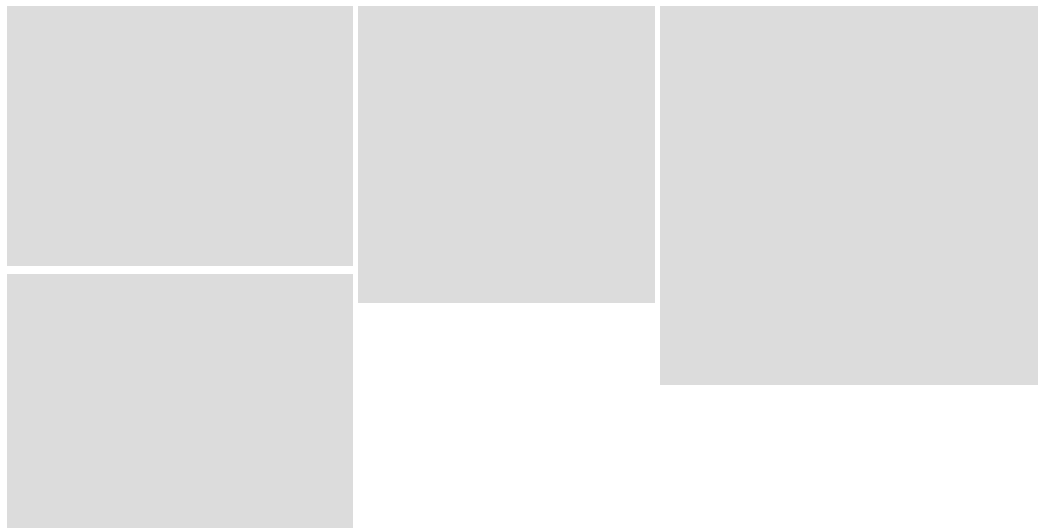
Execution > Recycling & reclaiming components

For the outdoor spaces, recycled tyres were used. For the inside furniture, a wooden mezzanine in one of Can Batlló's warehouses was dismantled and the wood reused.

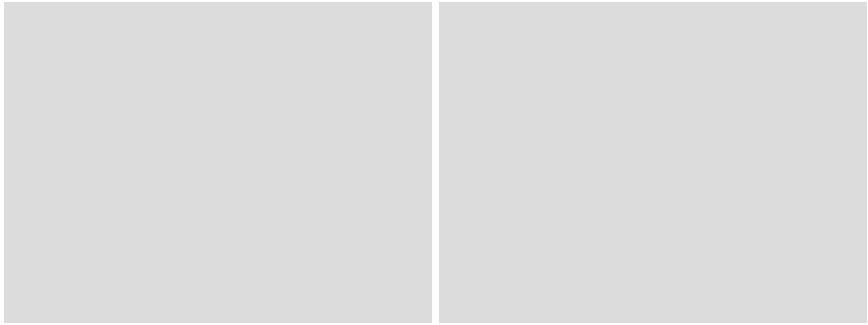
E35

Execution > Collective assisted DIY-DIT

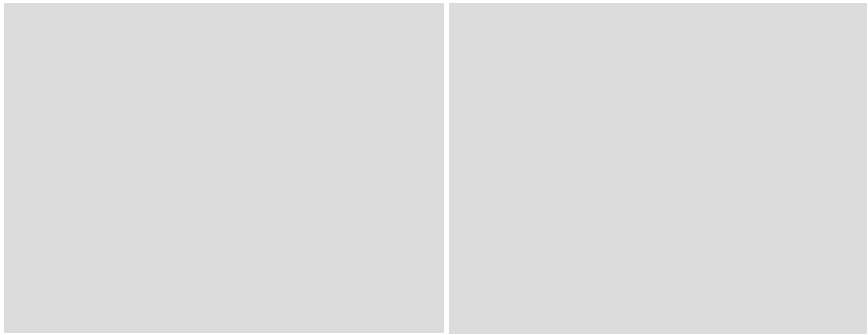
Construction was developed by architects; no professional construction took place.



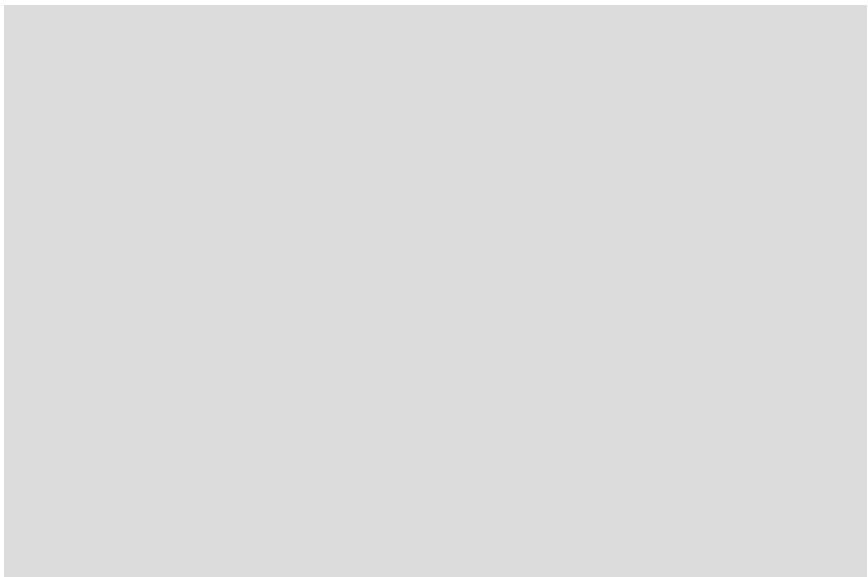
Deconstruction of the mezzanine in Can Batlló warehouses and "harvest map".



The construction of outdoor spaces included future users as participants.



Construction works of indoor (left) and exterior gallery (right).

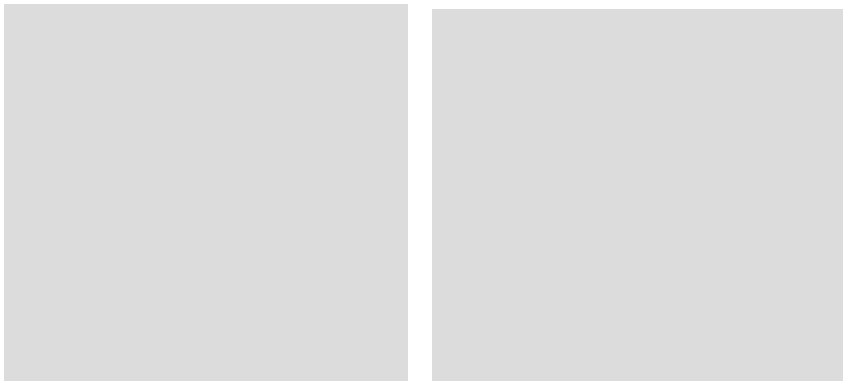


Exterior gallery as built.

OUTCOMES

The first proposals developed by MUT team took place during the Covid-19 lockdown in 2020. The impossibility of understanding the daily functioning of Arcàdia School, which is significantly different from conventional schools, resulted in difficult communication between architects, who proposed designs that, according to Arcàdia, did not fulfil their needs. After lockdown, in-person meetings enabled much more fluid communication and a better understanding of the school's needs. This was encouraged by activities such as the construction of the outdoor space during the summer and visits by the architects to the school in September to observe the way the space performed directly.

The meanwhile condition of Arcàdia, pending its relocation to another warehouse, drastically reduced the available resources. The success of the intervention was only possible with the significant voluntary involvement of participants and the employment of strategies based on the reuse and recycling of materials. The architects acknowledge that the length of the project, a year and eight months, resulted in fatigue and weakened the motivation of some the participants. Thus, the implementation of this sort of refurbishment needs to take into consideration both the time involved and the volunteering context.



Indoor artefacts, prototype and axonometry.

More information:

Arcàdia School website: www.arcadiacb.info

Promotional video: www.youtube.be/0rxhyCic_0Q

www.instagram.com/mut.etsav

www.xarxanet.org/projectes/noticies/arcadia-i-mut-una-escoleta-basada-en-larquitectura-joc

www.twitter.com/mut_etsav

www.etsav.upc.edu/ca/noticies/8115

www.canbatllo.org

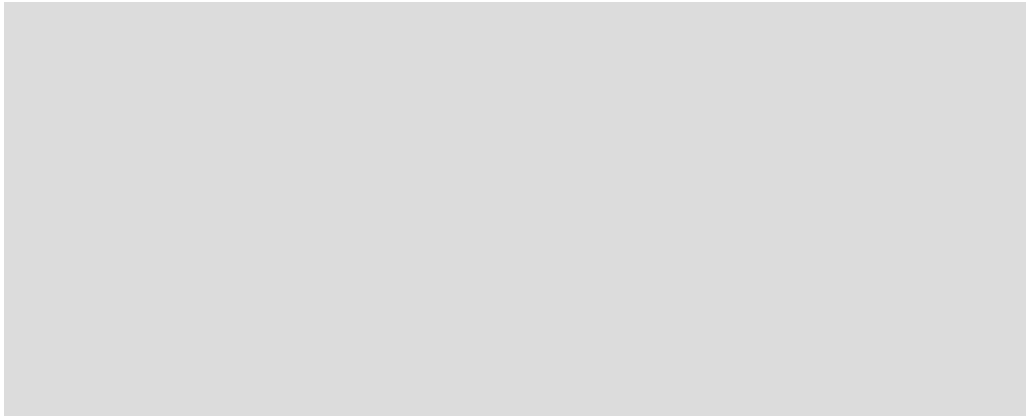
Images: courtesy of MUT.

STAKEHOLDERS

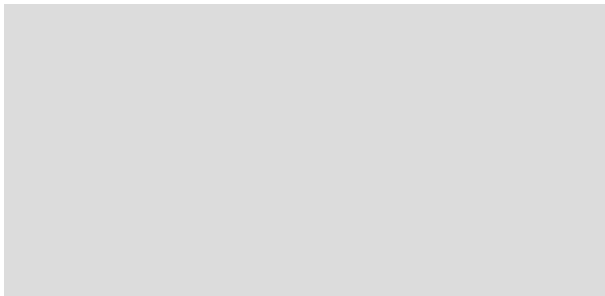
Civic engagement	Associations and residents of Can 60: Capoeira Canigó, Factoria Heliográfica, Posada la Europea, Estaca and AM (art workshops), R20bis (bike workshop), Apip foundation (social integration flats), la Poderosa (dance studio), Can Fanga (ceramics workshop), residents in 10 flats. Associations: Sostre Civic housing cooperative, Tot Raval, Fundació Arrels, Impulsem
Public administration	Municipality of Barcelona CCCB Culture Center (Citizen's Technical Consultation Office)
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

CONTEXT & AIMS

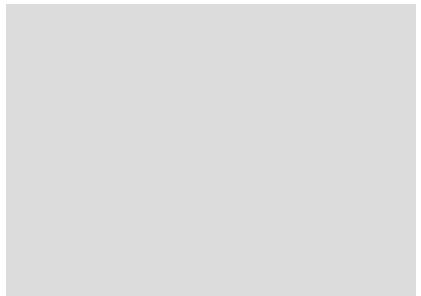
Can 60 is one of the best examples of casa-fábrica (house-factory) typology in Barcelona: the form that the first factories took before the demolition of the city walls in the nineteenth century and their migration to Poblenou. These typically consist of a block with workers' housing round the perimeter and a roofed central area for industrial production, separated by a central narrow alley that served as a means of access. Built in the Raval neighbourhood, in Barcelona city centre, Can 60 is today part of a social ecosystem with a fragile balance between the ambition of profit-driven urban development and a very heterogeneous social fabric with a mixed immigrant population, people at risk of social exclusion and new incomers attracted by the cultural life and universities. However, the whole block was acquired by a foreign investment group, which aimed to demolish the factory to build luxury flats for tourists. The loss of its architectural heritage would have damaged the neighbourhood and increased the rapid gentrification of the area. In addition, if the building disappeared, significant intangible heritage would be lost, and with it the ties with the social fabric within which Can 60 exists would be broken: this would include the disappearance of the several institutions and associations resident in Can 60 that make a significant contribution to cultural life, both local and international. Stakeholders designed a short-term and a mid-term strategy to "save Can 60", within the context of the Piso Piloto Exhibition at CCCB centre Barcelona in 2015. The short-term strategy consisted of preparing an exhibition to coincide with Raval's annual community festival, highlighting the productive activity of Can 60 – i.e., what would be lost – and opening up the building to the neighbourhood to make local social demands visible. In parallel, the long-term strategy included a technical report that aimed to produce arguments and graphic evidence to convince the administration to preserve the building, developing both a spatial and a social cartography of the building, outlining the underlying pathology of the building and the cultural and social impact of the different organisations that Can 60 hosted.



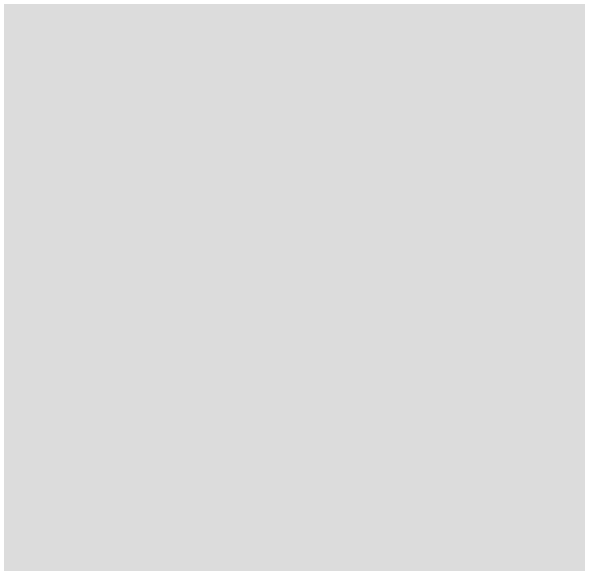
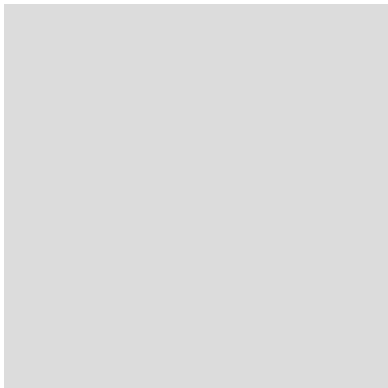
"Diagnosis table", key meeting that gathered all stakeholders, unaware of their shared expulsion threat.



Can 60 casa-fàbrica (house-factory) evolution.



Factory Houses in Riereta Street.

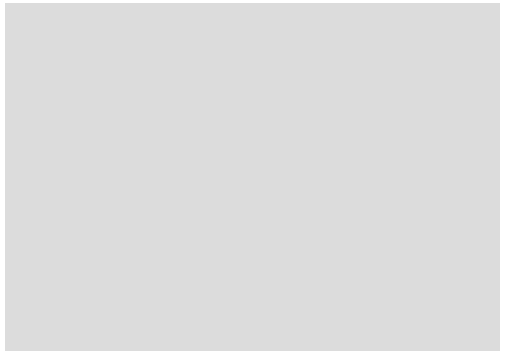
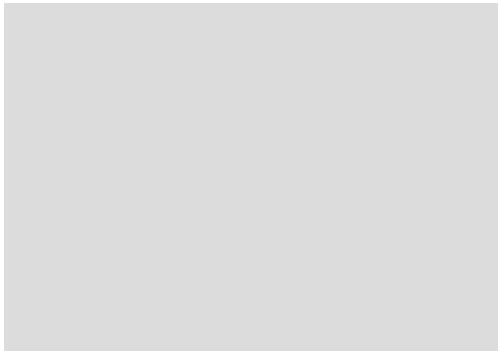


Left: exhibition in central alley exposing the production of Can 60 – what would be lost – as shading structures.
Right: Can 60's associations stakeholders diagram, describing their impact at different scales.

W12 CAN 60



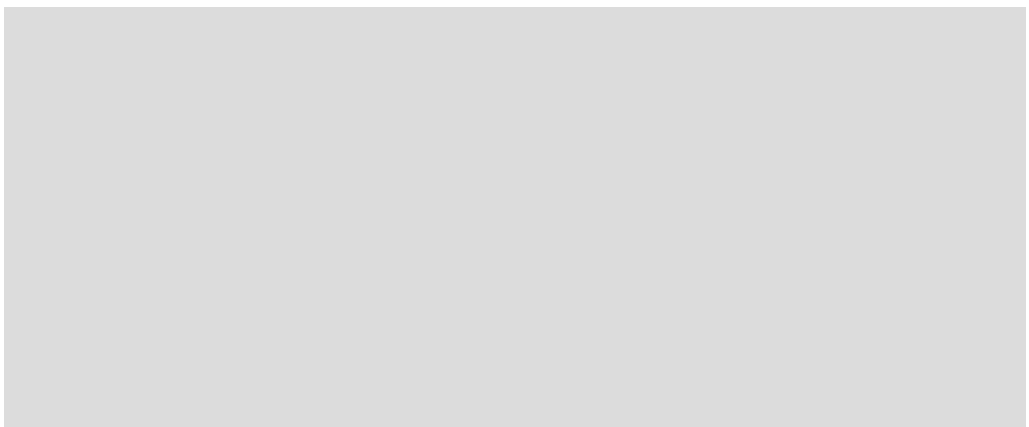
W. WORKS | FACILITY



W. Media campaign "Save Can 60".

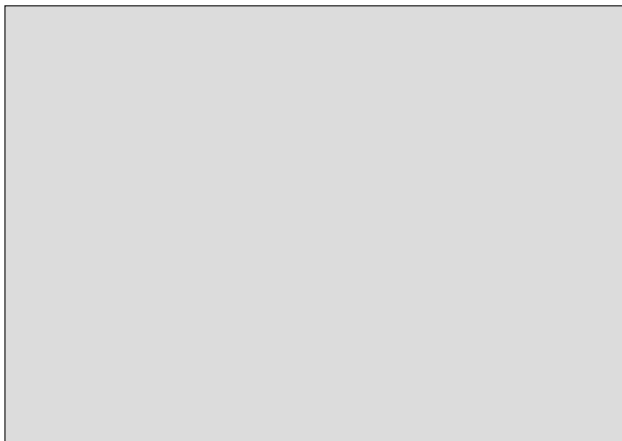
COLLABORATIVE TOOLS

PHASE 1 CHRONOLOGICALLY ↓	G13 S41	Data gathering > On-site technical support office + Stakeholders > Collaboration with external events Can 60's situation was alerted through a free Citizen's Technical Consultation Office set in July 2015 within the framework of Piso Piloto exhibition at CCCB by AC and Pei.Lab PUJ.
	S11	Stakeholders > Identify stakeholders Through meetings with stakeholders, a mapping of associations and workshops in the building was developed, along with a diagram of their social and cultural impact.
	G22 E12	Data gathering > Meetings with stakeholders + Execution > Do not do (II): connect Can 60 dwellers gathered around a "diagnosis table", where they discovered that they were unaware of other tenants' same situation. This united them to create a joint strategy for the first time.
	C13	Projective cartography > Building as socio-spatial ecosystem The cartography included both the social layer of associations, their activities and impact, and the building with its spaces, deficiencies and pathologies.
	A31	Analysis & Strategy > Strategic action plan Consisting of short and long-term strategies. First, to make visible the problematic and claims. Secondly, a technical report aiming to convince the municipality to preserve the building.
	A11	Analysis & Strategy > The (yellow) manifesto The manifesto became a key document to clarify goals and strategies.
	S41	Stakeholders > Collaboration with external events In order to make the claims visible, a public event was organised with Raval festival aiming to achieve the maximum visibility. In addition, the on-site office was placed in a CCCB exhibition.
	P33	Post-occupancy > Process reports A process report is available at www.arquitectosdecabecera.org .
	M32	Process management > Involving decisive partners Preserving the building escaped the competences and possibilities of both technical staff and dwellers. Thus, effort was placed in convincing the administration to join the struggle.
	PHASE 2 ↓	

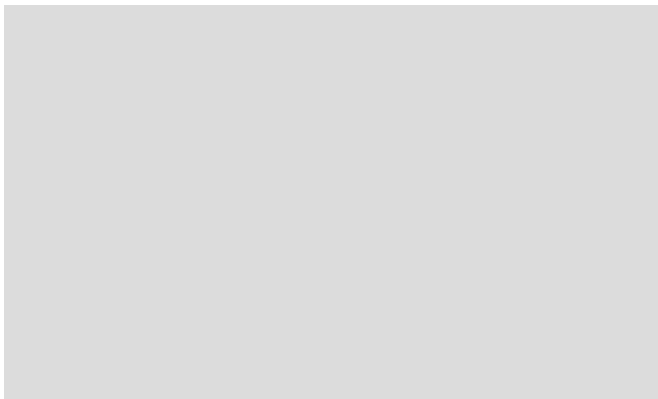
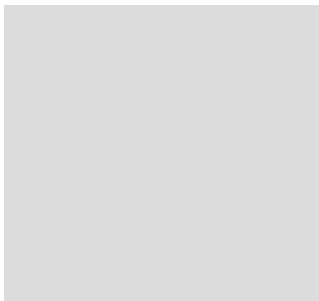


Building cartography.

W12 CAN 60



Technical report analysing building pathologies and dwellers' use of the space. The whole report is available at www.arquitectosdecabecera.org.



Spatial cartography of Can 60.

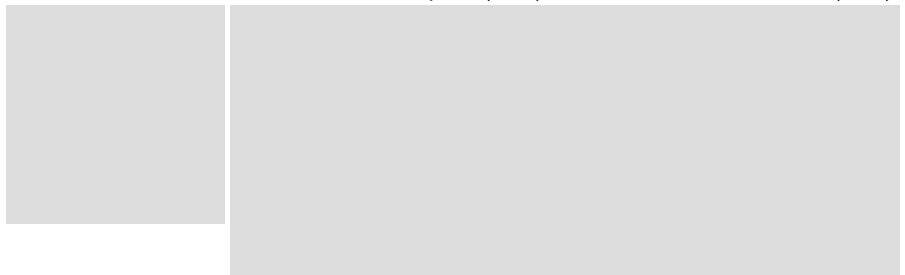


Left: plan of Can 60 ground floor. Right: "Barcelona saves the old factory can 60 in Raval", newspaper article on 21st September 2016.

OUTCOMES

Can 60 evidenced the transformative capacity of local associations and academia in achieving an effective outcome in the city. On the one hand, it convinced the municipality of the importance of preserving the building, which aligned with their political agenda. After a year-long process of negotiation, in September 2016 the municipality bought Can 60, with the intention of transforming it into a public facility. Moreover, as a legislative outcome, the preservation campaign became highly successful in this regard, since Can 60 acted as a catalyst that ended up with the listing of 38 cases-fàbricas in the Raval neighbourhood. On the positive side, the building is publicly owned and will be preserved. However, unlike other cases, such as Warehouse 11 (W09) or Coopolis (W10), where the municipality understood the exceptionality of the projects as resulting from social struggle, the transformation of Can 60 from a neighbourhood associations hub to a civic centre became part of the standard public procurement mechanisms and protocols through the public agency Barcelona d'Infraestructures Municipals (BIMSA, Barcelona Municipal Infrastructures). Due to the political decisions that were made, most of the stakeholders involved in the social movement that preserved the building were left out of the process. In addition, community architects involved in the preservation phase were excluded from the process by the organisation of a public architecture competition with strict entry requirements. Overall, the development through the standard mechanisms, directed toward building procurement and taking no account of its social dimension (addressed by another municipal department that was not involved in the project), undervalued the contribution of stakeholders involved in the demands that had motivated the preservation of the building.

The refurbishment project is being developed by Ravetllat Arquitectura, who won the 2017 competition. As of 2022 (seven years after the struggle and five after the competition) no construction work has started. Some of the associations have left Can 60, while others still use the space with no clear moving date. Since major works are planned, the building is in a continuous process of decay, although some minimal work has taken place. This situation questions the "all or nothing" attitude of municipal administration when addressing heritage, increasing the need for meanwhile temporary low-cost interventions that prevent deterioration, such as the ones carried out in Coopolis (W10) and Escocesa Warehouse L (W13).



Can 60 refurbishment, project by Ravetllat Arquitectura. Source: ravetllatarquitectura.com.

[More information:](#)

www.arquitectosdecabecera.org/AC/en/portfolio/salvem-can-60

www.ravetllatarquitectura.com/Can-60

Images: courtesy of Arquitectos de Cabecera and Ravetllat Arquitectura (this page).

STAKEHOLDERS

Civic engagement	Artists' association La Escocesa Creation Factory
Public administration	–
Community architects	Arquitectos de Cabecera and Pei.Lab Universidad Javeriana de Bogotá

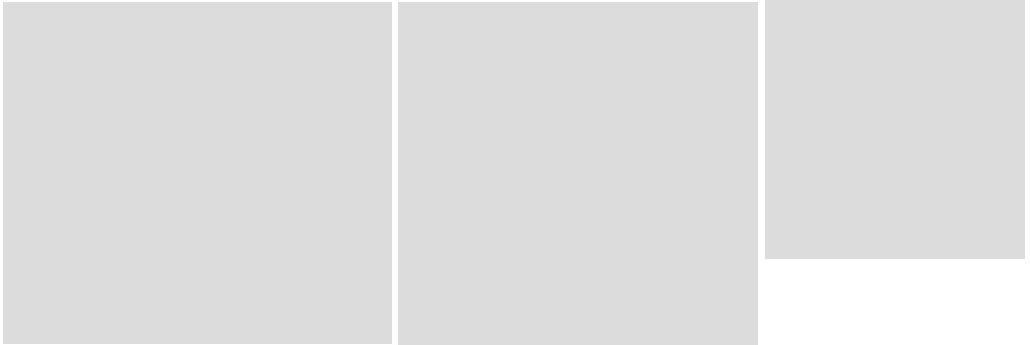
CONTEXT & AIMS

Warehouse L is part of the industrial complex of a Escocesa in the Poblenou neighbourhood, Barcelona, that was abandoned for many years and eventually partly reconverted into a self-managed creative centre. Despite being owned by the municipality, it has been under constant threat in a neighbourhood that has been significantly transformed in the past two decades as a result of the 22@ masterplan, accompanied by frequent protests about the erasure of the neighbourhood's past and the extreme gentrification of the area. In 2019 it presented a complex and fragile scenario: an artists' community was resident in the central buildings and a comunidad gitana (traveller community) and small workshops in those on the perimeter. In terms of buildings, only one of the warehouses was officially used by artists, while many were in poor condition.

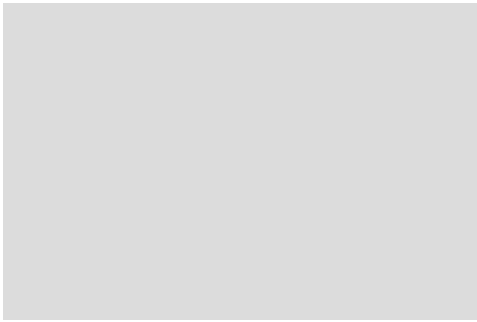
The project aimed to renovate a second warehouse for artists' studios. The first intervention in Warehouse L took place in summer 2019, when the space was used for an academic summer workshop in exchange for improvements to the building that were made during this period. The walls that covered up windows and doors were demolished and a new connecting door was built with recycled materials. The space was inaugurated with a temporary spatial alteration, an inflatable "air barricade", that enabled the newly imagined space to be rediscovered. In the months following the workshop, several construction projects took place to further renovate the space with the participation of different stakeholders: from floor repairs carried out professionally and window construction by la Escocesa maintenance staff to a final two-day construction workshop in which artists and architects built partitions with recycled materials.

Given the scarcity of materials, acquiring donations from museums and private companies became a crucial step for the success of the construction. This last intervention had to be removable and adaptable, so the use of (second-hand) metal props was decided on as the best option: in addition to functioning as a structural reinforcement, since the first-floor roof structure was unstable, it became an adaptable and appropriate system. Finally, artists started using the space and adapted it to their needs.

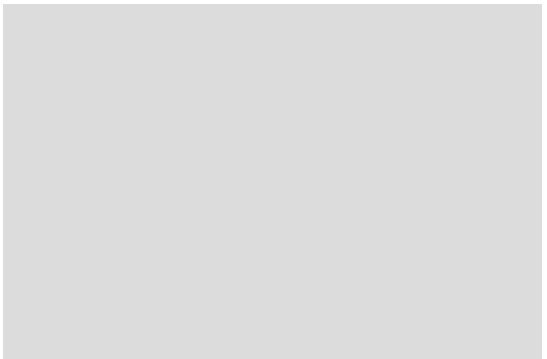
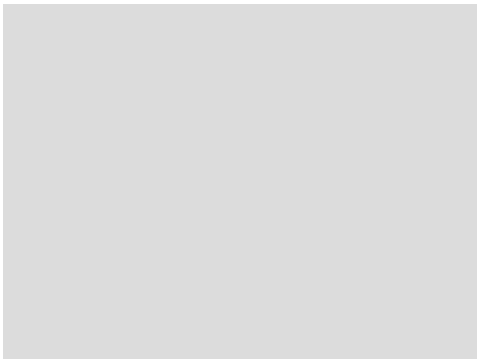
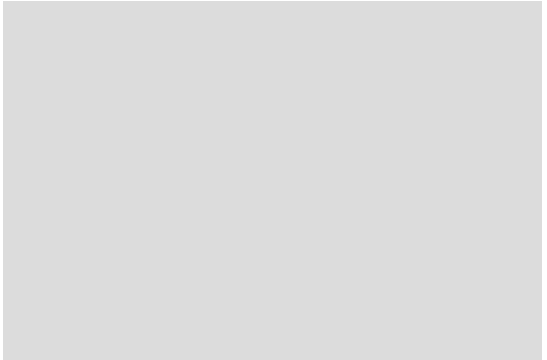
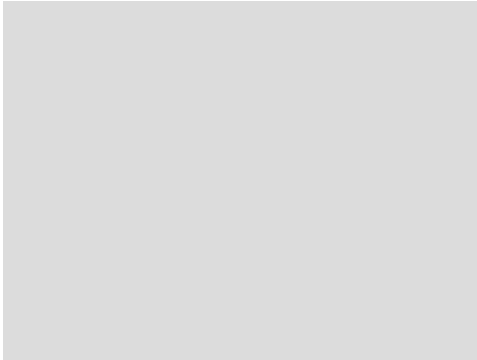
As a result of the process, the warehouse was able to open in early 2020 with new artists' studios and shared spaces. Construction works took place a-legally with a minimum budget: 420 m² of the space was restored with a budget of 48 €/m², way below any standard for public facilities construction or refurbishment.



Left: Aerial view from la Escocesa complex, with Warehouse L highlighted. Source: google earth. Middle: street view in 2019. Right: Foseco Warehouse, in la Escocesa, collapsed due to public administration inaction.



Warehouse L as found.



Several moments of the process: original state, construction phases, and finally artists' completion of the studios and space appropriation.

W13 LA ESCOCESA WAREHOUSE L

COLLABORATIVE TOOLS

time
↓

G22
E21

Data gathering > Meetings with stakeholders + Execution > Borrow - barter

Through an agreement with the artists association "la Escocesa", the space was used for a summer workshop in exchange for the opening and conditioning of the space. Meetings were held with the artists and the gipsy community in order to agree on how to intervene in the complex.

D31

Design > Intermediary situations: "the meanwhile"

To prevent the warehouse's collapse as a result of abandonment the intervention aimed an immediate use and stop deterioration.

S21
S32

Stakeholders > Direct invitation + Spatial alteration

After the first opening of the warehouse, the construction of inflatable structures became an opportunity to rediscover a space that had been locked for decades. An invitation was left in the door of each artist's studio of La Escocesa to invite them to the spatial alteration happening.

E43
D43

Execution > Do it anyway + Design > Declaring a Temporary Autonomous Zone

The demolition and construction works took place without permits, given that la Escocesa is an area of artist experimentation.

Professional construction

One of the exterior walls and the reparation of the pavement were carried out by professional work.

D11
D23

Design > Co-design workshops + Enabling: adaptable system

Studios co-designed with wooden DM boards attached to removable structural support props, allowing an easy reconfiguration of the space. Modifications happened from early post-occupancy.

D32
D33

Design > Leveraging material scarcity + Designing for low-risk construction

The lack of resources required a design "with whatever available", minimizing construction costs, reusing materials for the door and looking for donations, for example DM boards from a museum.

E35

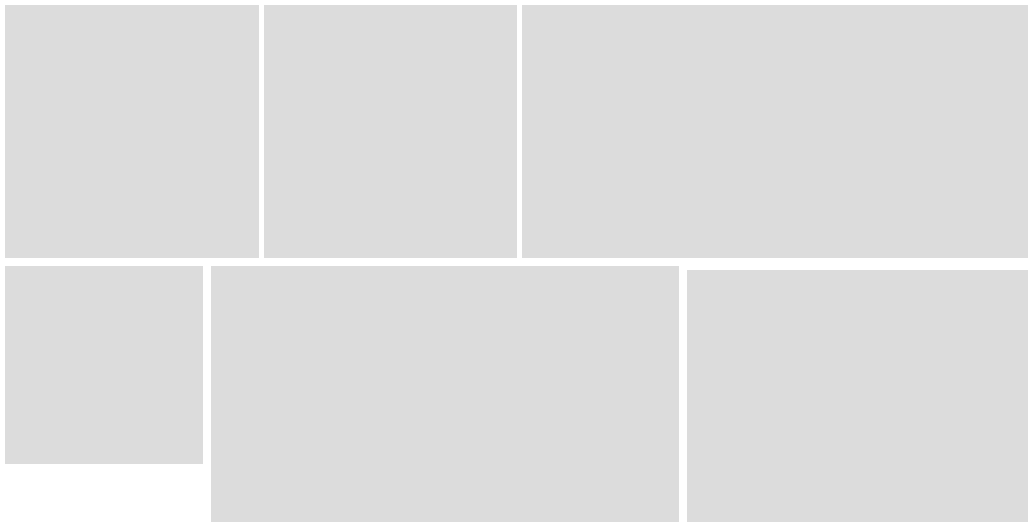
Execution > Collective assisted DIY-DIT

Studios were built by artists and architects in a weekend-long construction workshop.

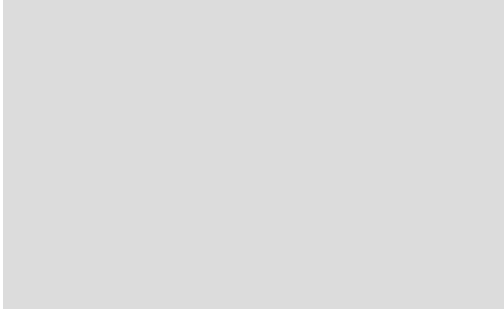
E33

Execution > User to complete

Due to both material scarcity and users' profiles, studios were left incomplete. The intervention intended to maximise the degree of openness to user's manipulation through construction techniques and material choices.



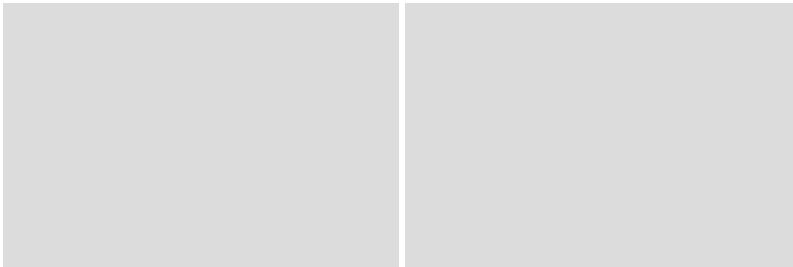
Spatial alteration during ETSAB summer workshop in 2019, using inflatable architectures.



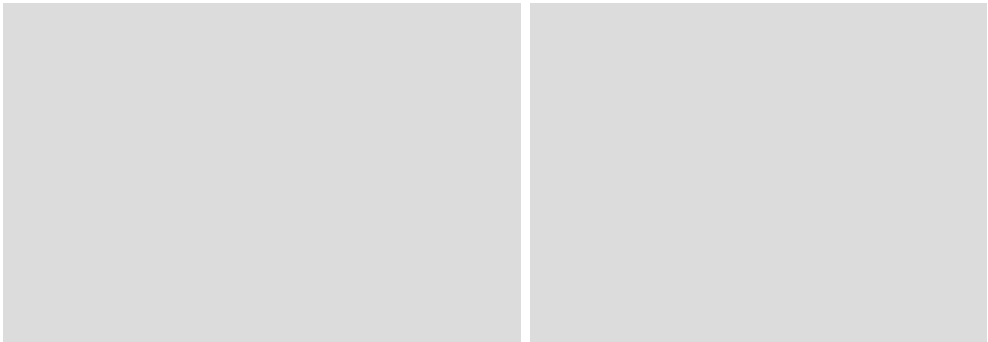
Decision-making meeting with the artist's association members and director.



Demolition, door construction, and studios construction process.



Images from studios before artists' appropriation, photos by Gabriele Basilico.



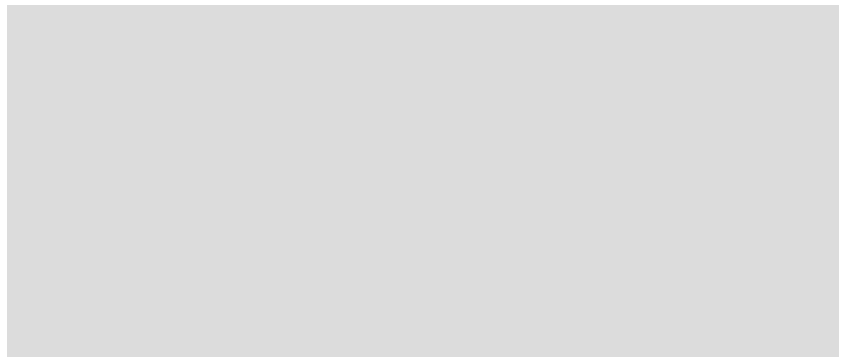
Warehouse L a year after the construction of the studios. Some studios were easily reconfigured thanks to the assembly system.

OUTCOMES

Warehouse L became a successful informal self-built refurbishment of a listed building with the aim of preserving civic heritage, opening up the space after decades of closure and claiming it for artists to use as studios. Today, despite the fact that the current condition of the building is far from meeting the desired building standards as a result of budget constrictions, Warehouse L operates successfully as an artists' space and is constantly being adapted to meet new needs, evidencing that the right choices of materials and construction have been made.

Away from fostering the consolidation of precarious conditions, the relevance of this project lies in the fact that this intervention was not planned by the municipal administration as its owner, nor was it anticipated (but was desired) by the artists' community. An informal intervention became a protest against the inaction of the municipal administration (due to limited resources) and against an approach of planned obsolescence in heritage buildings (sometimes resulting from political agendas), which traditionally justifies further demolitions.

Contrasting with the nearby Warehouse Foseco, which collapsed after years of inaction, with a refurbishment project ready to be executed, Warehouse L aimed to create an intermediary condition that enables explicitly temporary uses that improve conditions for the first users and prevents the planned deterioration of warehouses. La Escocesa exemplifies the need to address the "meanwhile" conditions of buildings with temporary low-budget removable interventions that allow immediate use and stop the building decaying, as seen in Warehouse 11 (W09) and Coopolis (W10). In addition, la Escocesa, in the same way as Warehouse 11, evidences the potential of local communities to develop these kinds of interventions if the municipality has limited resources. In 2022, the warehouse is awaiting investment to consolidate the studios with more comfortable conditions.



New door connecting new studios with old ones.

More information:

www.arquitectosdecabecera.org/AC/en/portfolio/nau-l-la-escocesa

www.laescocesa.org

Images: courtesy of Arquitectos de Cabecera.

PAS A PAS

(e)co Platform is part of Pas a Pas project in Les Planes neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

(e)co PLATFORM

The (e)co Platform team project consists of a reiteration of the (e)co project that was originally built for the European Solar Decathlon competition in Madrid in 2012 as a self-managed cultural communal facility linked to a civic centre. The nature of the building as a light assembly structure offers the possibility of dismantling and reassembling it in a new location in the future. After being installed at ETSAV as a student space, in its third assembly it was adapted as a community space for the local residents of les Planes within the project Pas a Pas (W05).

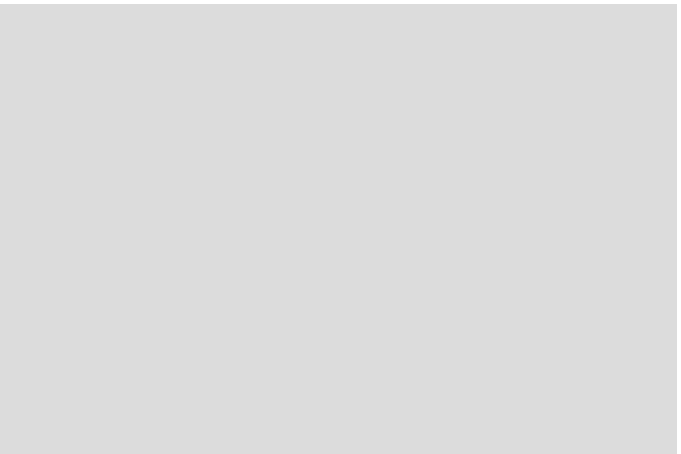
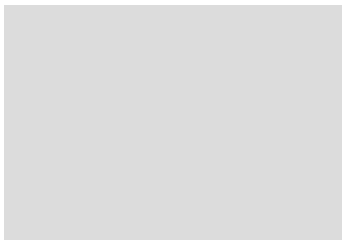
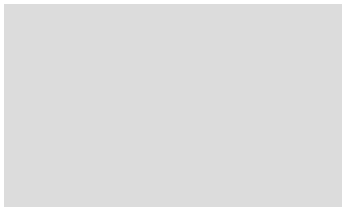
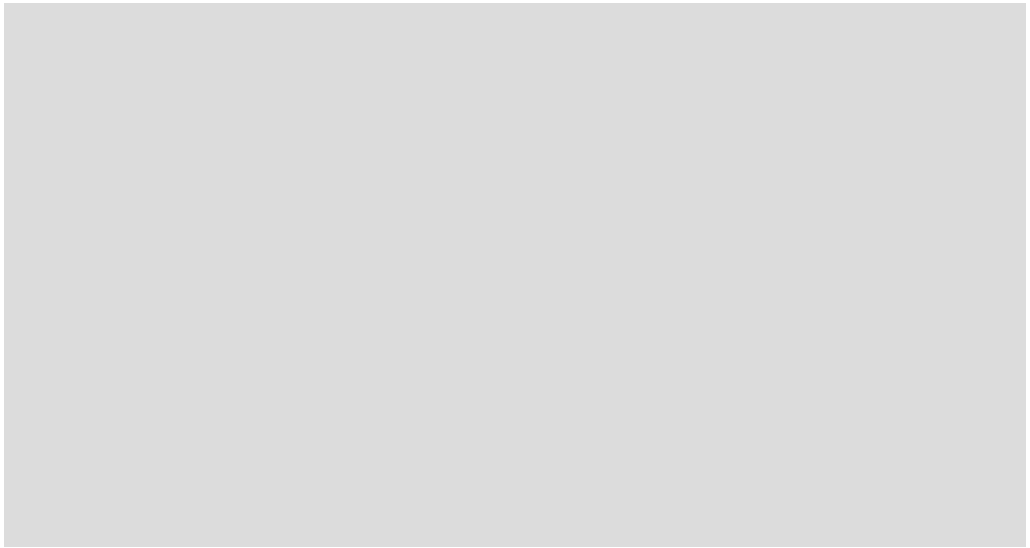
The analysis and design for the reinstallation of the project, linked to a neighbouring civic centre, was developed by Arqbag architects' cooperative. The building was leased by ETSAV to the municipality, who financed the project with 70,000 € for its reassembly on public land. The construction was paused during 2015 and partly vandalised, and finally completed in 2016.

User support and community engagement activities were developed by Arqbag and a residents' working group, under public commission scheme, over eighteen months. The (e)co Platform became an on-site office for the Pere Grau Space project (W15).

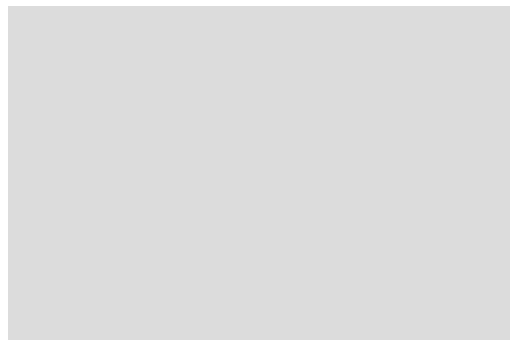
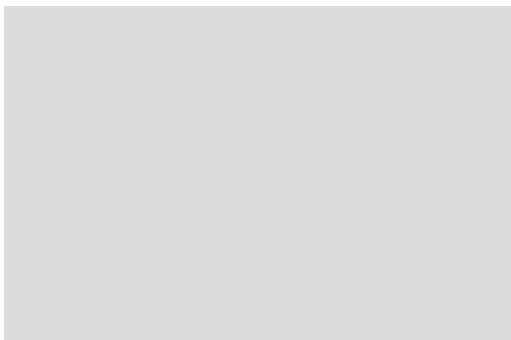
OUTCOMES

The relocation of an assembled pavilion to the (e)co Platform was both a result of, and a catalyst for, synergy in the local community, including public and private partners, the neighbourhood and academia. The platform was made possible thanks to an agreement between three partners: the university, that leased the building, the municipality, that provided the land and funding for its reconstruction, and the local community, who manage it. In addition to its use as a self-managed space linked to a civic centre, the (e)co Platform served as an on-site office for the design of the nearby Pere Grau Space (W15).

Its nature as a building disconnected from services networks was not considered in any of the regulations applicable at that time. In this regard, the (e)co Platform can be considered a Temporary Autonomous Zone (TAZ) (D43), with the complicity of the administration, enabling it to foresee regulatory changes and test building solutions. The disconnection of the building from services networks produced the need to train users, as well as offering the opportunity for building performance monitoring, producing a pedagogical impact on users, municipal technical staff and architecture students. In addition, during the first months of use, Arqbag developed a project to animate the space and organise activities with users, as commissioned by the municipality. This served to reveal to the municipality the importance of post-occupancy stage support.



(e)co prototype in three different sites with different layouts: Solar Decathlon Europe competition in 2012 (top left), in ETSAV campus as an educative space (2012-2015) (below left) and in les Planes neighbourhood as a community centre (2015-currently) (right; picture by A. Flajszer).



(e)co Platform community center (pictures by A. Flajszer).

W14

PAS A PAS LES PLANES

(e)co PLATFORM

COLLABORATIVE TOOLS

Academic + public administration collaboration

The success of the other projects in Pas a Pas encouraged the parts to continue with the collaboration. (e)co platform consisted in the moving of a pavilion from ETSAV to a public facility.

D24
E23

Design > Typological variations + Execution > Dismantling & reassembling buildings

Industrial construction systems allowed dismantling and reassembling it in different locations with different functions. In each new assembling (Solar Decathlon competition, ETSAV and Les Planes) the building accommodated its form to specific needs.

D22
E13

Design > Enabling: user manipulation + Execution > Reprogramming time in space

The space could be adapted in relation to different needed uses. In addition, activities were programmed in relation to comfort temperatures achieved.

D43

Design > Declaring a Temporary Autonomous Zone

Although the building was disconnected from services network (sewers, electricity) it did not fulfil regulations at that time. It was developed and implemented with the approval of the municipality.

E35
E22

Execution > Collective assisted DIY-DIT + Execution > Recycling & reclaiming components

Co-construction workshops were developed with reused materials.

P12

Post-occupancy > External evaluation: stakeholder review

Workshop with users allowed to review the process and the performance of space.

P21
P31

Post-occupancy > Post-occupancy technical support + Manuals & toolkits

Arqbag developed a task of dynamisation of space in relation to activities and building performance. In addition, they developed instructions for energetic performance of the building

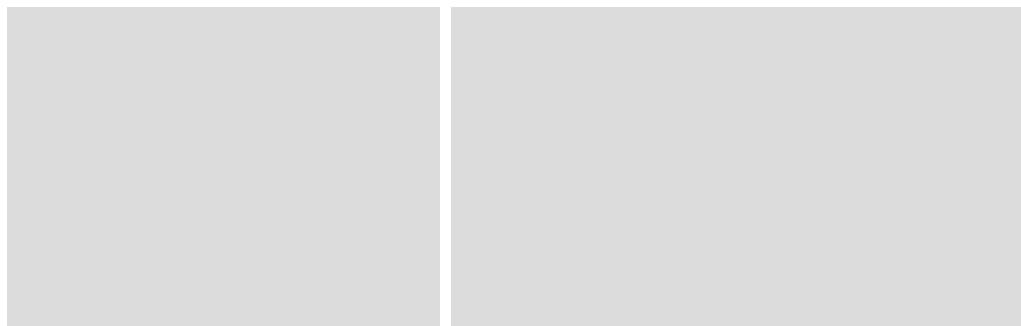
P22

Post-occupancy > Building monitoring

Monitoring of the building energetic performance increased awareness of users on carbon footprint and energetic consumption.

On-site technical support office

(e)co Platform became an on-site design office for the next project of Pere Grau Space. Activities developed there include analysis workshops and meetings with neighbours in the diagnosis phase.



(e)co Platform community centre under construction (left) and as used (right).

PERE GRAU SPACE

Les Planes Neighbourhood, Sant Cugat del Vallès | 2014-2017

STRATEGICAL

PAS A PAS

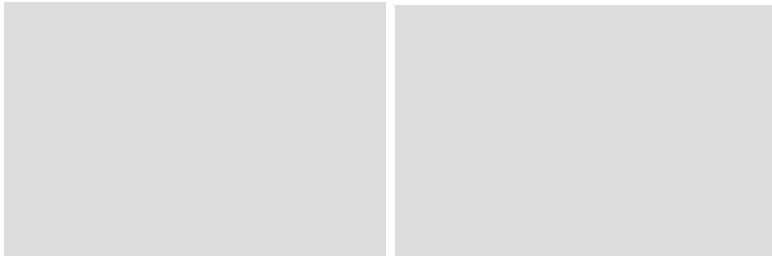
Pere Grau Space is part of Pas a Pas project in Les Planes Neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

PERE GRAU SPACE

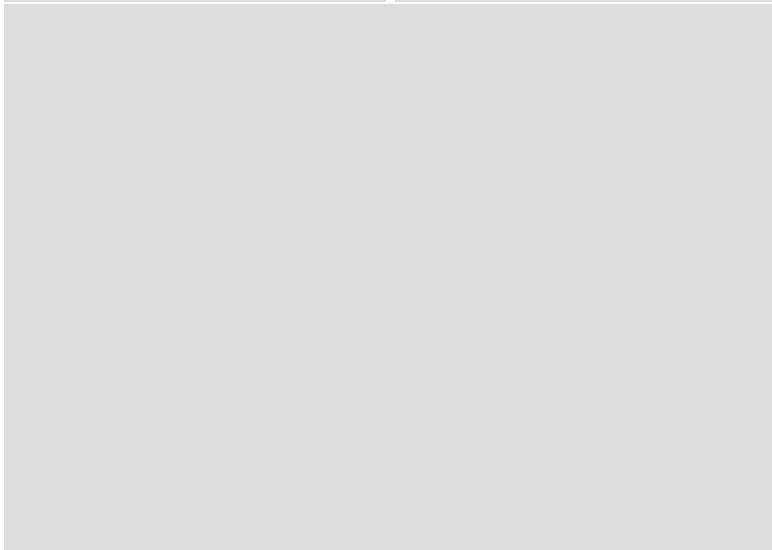
Pere Grau Space consists of the development of an existing playing field for sporting and community activities. The project is located near (e)co (W14), which served as an on-site office. The project was commissioned by the municipality and led by Arqbag, within the Pas a Pas project (W05). The design guidelines emerged from a “participative process” with representatives from different neighbourhood associations: a light roof for the entire field with no vertical façades, and the possibility of future interventions such as spectator seating or a new vertical extension on top of the changing rooms. The building makes the most of pre-existing elements, in aiming to reduce costs: the existing retaining wall on one side of the playing field becomes the sole foundation of the new “T”-shaped structure. The weight of the roof is counterbalanced by a stone counterweight on the shorter side of the structure. The existing walls collect rainwater at the high point of the land and generate three biodiversity nodes, helping to dissolve the human-made boundary between the city and the Serra de Collserola Natural Park. The roof allows the space to be appropriated for a new set of social, cultural and sporting activities, and encourages the appropriation of new spaces, promoting the transformation of the whole Pere Grau area. The Pere Grau area has now become a new social centre and meeting space for the neighbourhood.

OUTCOMES

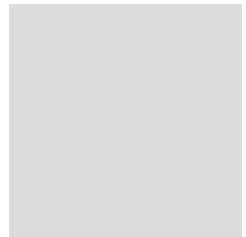
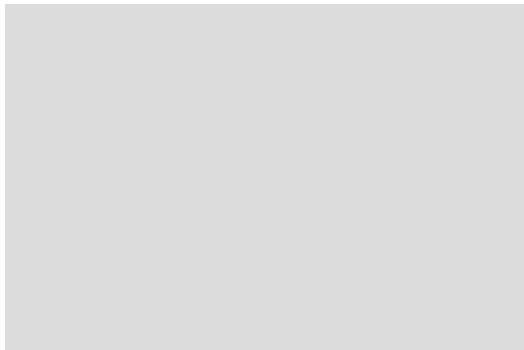
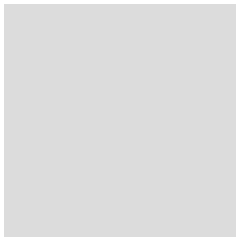
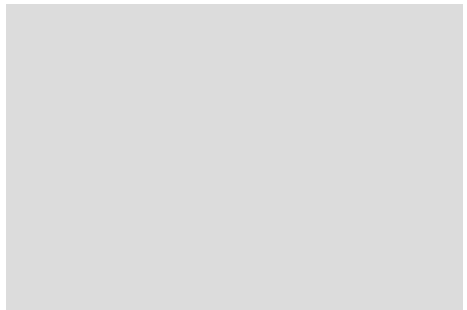
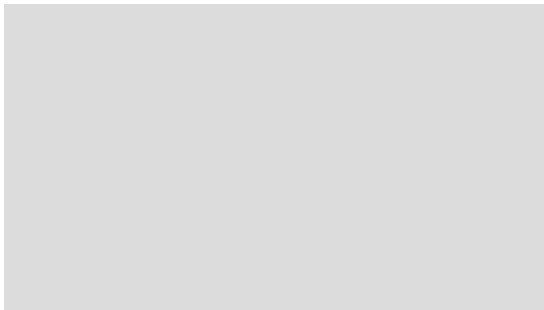
Espai Pere Grau offered evidence of the potential of a successful collaboration between the municipality and the university at two different points. One of these was a testing ground for the training of professionals who would go on to develop the Community Energy Refurbishmen (W06). The second was during the construction of the space itself, which required professional construction skills due to the nature of the work to be carried out. Between these two points, the diagnosis and co-design phase proved the value of an efficient approach to the improvement of a community space, which translated into a positive reception from users in the post-occupancy phase. In this regard, the nearby (e)co pPlatform (W15) became a useful meeting space as an on-site office.



Original condition and meeting with local community.



Diagnosis phase, analysis of requirements (top) and parameters of the three moments of the intervention: roof, grades and maintenance (below).



Pere Grau Space during construction (top left) and as built (all other images).

W15

PAS A PAS LES PLANES

PERE GRAU SPACE

COLLABORATIVE TOOLS

Academic + public administration collaboration

The success of the other projects in Pas a Pas encouraged the parts to continue with the collaboration. As part of the larger Pas a Pas project, Pere Grau Space changing rooms area became the testing ground for the training workshops for the REC project.

G13

Data gathering > On-site technical support office

(e)co Platform became an on-site design office for Pere Grau Space. Activities developed there included analysis workshops and meetings with neighbours in the diagnosis phase.

M33

Process management > Discussion workshops

Regular workshops with neighbours took place in the diagnosis phase, and as validation on architects work in analysis and design phases, as well as post-occupancy evaluation.

S21

Stakeholders > Direct invitation

Stakeholders and neighbours were invited to join the process and the workshops.

**C16
C22**

Projective cartography > Neighbourhood + Routines & habits

A cartography of the neighbourhood was developed as part of the larger project of Pas a Pas, which included urban structure, mobility habits, and landmarks.

D31

Design > Intermediary situations: "the meanwhile"

The new structure foresees future extensions, such as public seats and a new volume on top

Professional execution

The nature of the works required professional construction and machinery.

E22

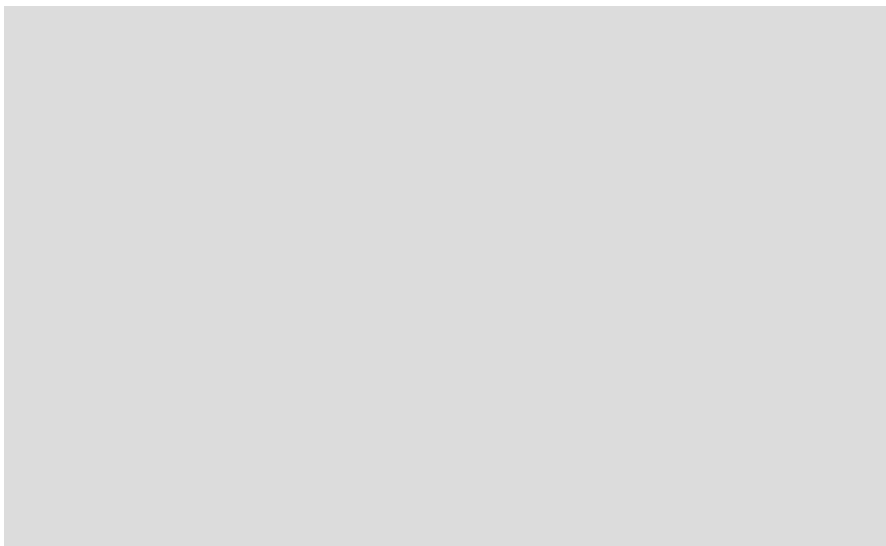
Execution > Recycling & reclaiming components

Materials were donated by Engrunes foundation and recycled from ETSAV, including tyres and wood components for the changing rooms area.

P12

Post-occupancy > External evaluation: stakeholder review

Informal meetings with users took place in the (e)co pavilion in order to review the process.



Mapping of the area.

STAKEHOLDERS

Civic engagement	School direction, students, teachers, non-teaching staff, and families of the following public schools of Santa Coloma de Gramenet: Fray Luis de León, c/Sant Joaquim, 91 Jaume Salvatella, av. de Francesc Macià, 124 Lluís Milet, c/ Lluís Milet, 22 Mercè Rodoreda, c/ de Milà i Fontanals, 59 Miguel de Unamuno, c/ d'Àngel Guimerà, 10 Serra de Marina, c/ Mossèn Camil Rosell, 96
Public administration	Municipality of Santa Coloma de Gramenet, Àrea Metropolitana de Barcelona (AMB)
Community architects	Equal Saree (Helena Cardona Tamayo, Julia Goula Mejón and Dafne Saldaña Blasco)

CONTEXT & AIMS

The project "Empatitzem, let's rethink the use of schoolyards"* is based on the importance of the school playground as a space for learning. It seeks to reimagine school playgrounds based on gender equality, cooperation and inclusive values. Rather than being merely a project about the transformation of space, this is above all about a pedagogical and participatory process.

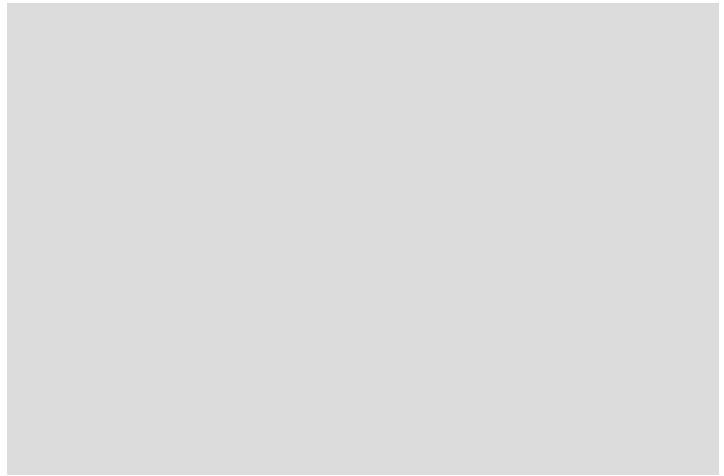
Between January and May 2018 five schools developed a critical analysis of playgrounds as well as improvement proposals, while a sixth undertook the same process later. The educational community, composed of teachers, students, families and non-teaching staff, analysed the space, reflected on relationships and values, offered ideas for improvement and, finally, agreed on proposals that were put into practice. Some activities were developed by architects and others by working groups from the schools, made up of members of the school management team, teachers, families and in some cases non-teaching staff; they received three training sessions from architects to develop each of the phases of the project: diagnosis, synthesis and design.

All the projects are currently completed or in process. Part of the execution was developed by municipal teams, while the rest went to public tender. In addition, local children created wall paintings and murals, guided by the artist Perriene Honoré.

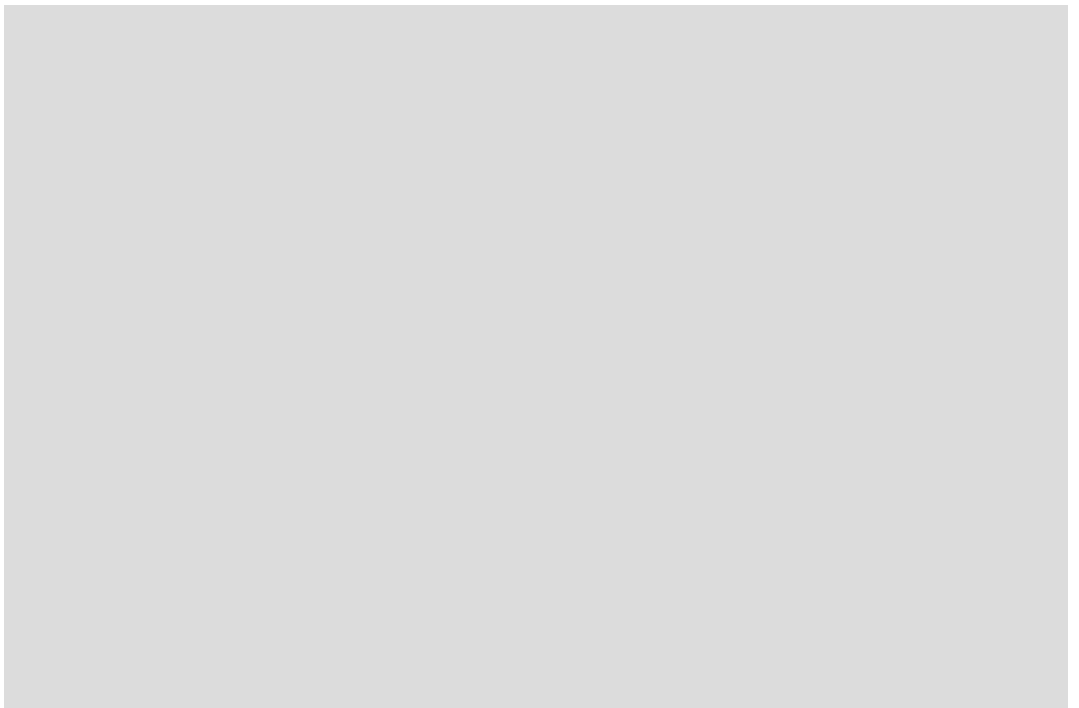
The methodology that was followed was later published in the form of a toolkit, "El Pati de l'Escola en Igualtat". This is available online in English: equalsaree.org/es/mediateca and published by Pol-len Edicions in 2019: *El Pati de l'Escola en Igualtat: Guia de Diagnosi i d'Intervenció amb Perspectiva de Gènere*.

*a play on words: empatitzar = empathize and pati = playground.

— information received from the architects, translated and adapted by the author.



Location of the five first schools involved in Empatitzem, Santa Coloma de Gramenet.



Fray Luis de León and Miguel de Unamuno schools, before the intervention and as designed by Equal Saree.

W16 COEDUCATIVE PLAYGROUNDS

W. WORKS | FACILITY

Plan of Serra Marina school playground.

Design guide '*Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective*' (see "more information").

COLLABORATIVE TOOLS

time
↓

Municipality organises the process

As part of a municipal agenda of school playgrounds transformation with gender perspective.

M21
A31

Process management > Map of stakeholder roles + Analysis & Strategy > Strategic action plan

At the beginning of the process all participants were given the action plan, including the chronogram and phases description, actions, key moments, and stakeholders involved. The action plan defined roles and responsibilities of each of the stakeholders in the different phases.

S21
S43

Stakeholders > Direct invitation + Digital platforms

A call for applications to participate was launched through social media and the municipality website, and an informing session. A selection of schools was made according to published criteria. The municipality developed a specific website for Empatitzem project.

G11

Data gathering > Ethnographic observation

Direct observation allowed teachers and students to have a critical approach to the playground, its uses and relationships that take place, emphasizing inequalities and gender hierarchies.

G21

Data gathering > Diagnostic workshops

Developed with children in order to collect their perceptions and experiences in the playground, combining oral, written and graphic tools.

G22
G23

Data gathering > Meetings with stakeholders + Interview / survey

A self-critical questionnaire and further group interviews were developed to increase awareness of gender inequalities in school playgrounds. Regular meetings took place with the work group "Comissió de Seguiment" ("Monitoring Committee") formed by schools' direction, teachers, non-teaching staff, and families. Occasionally, also municipal technical staff was involved.

C15
C32

Projective cartography > Urban void + Collective perception

Problems and needs were identified through developing mappings with students of different ages of each school to share ideas, synthesise and locate spatially the outcomes of the analysis phase.

A11
S25

Analysis & Strategy > The (yellow) manifesto + Stakeholders > Provide a platform for expression

Strategic lines were exhibited in large panels exhibited in a visible location. During the synthesis phase and first proposals, some schools left the results of the diagnosis on display in a visible place so that spontaneous contributions could be made.

D11

Design > Co-design workshops

Collages, models and 1:1 mock-ups were developed to discuss the space transformation of the courtyard. Decisions were agreed among stakeholders.

D23

Design > Enabling: adaptable system

Mobile elements and floor enabled a temporal use of the sports courtyards of Serra de Marina school.

Professional construction

Most of the interventions were developed through professional construction.

E35

Execution > Collective assisted DIY-DIT

Design and execution of the collective mural painting in different schools, assisted by the artist Perriene Honoré.

P12

Post-occupancy > External evaluation: stakeholder review

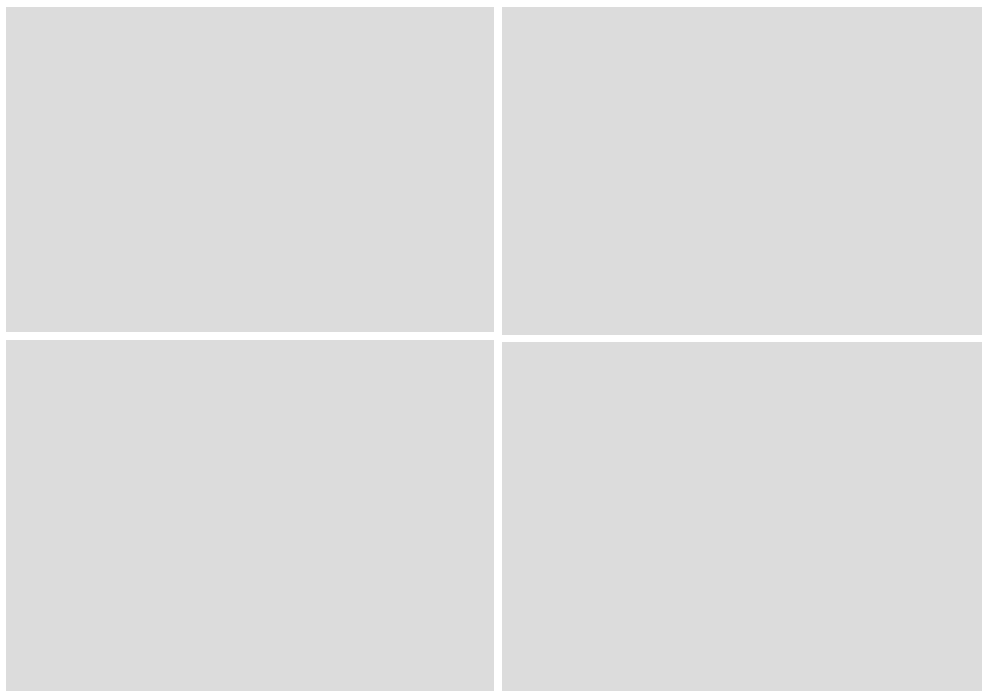
Evaluation questionnaires on the process methods and activities during analysis and co-design. The decision-making process was evaluated by architects; see Saldaña Blasco, 2020.

P31

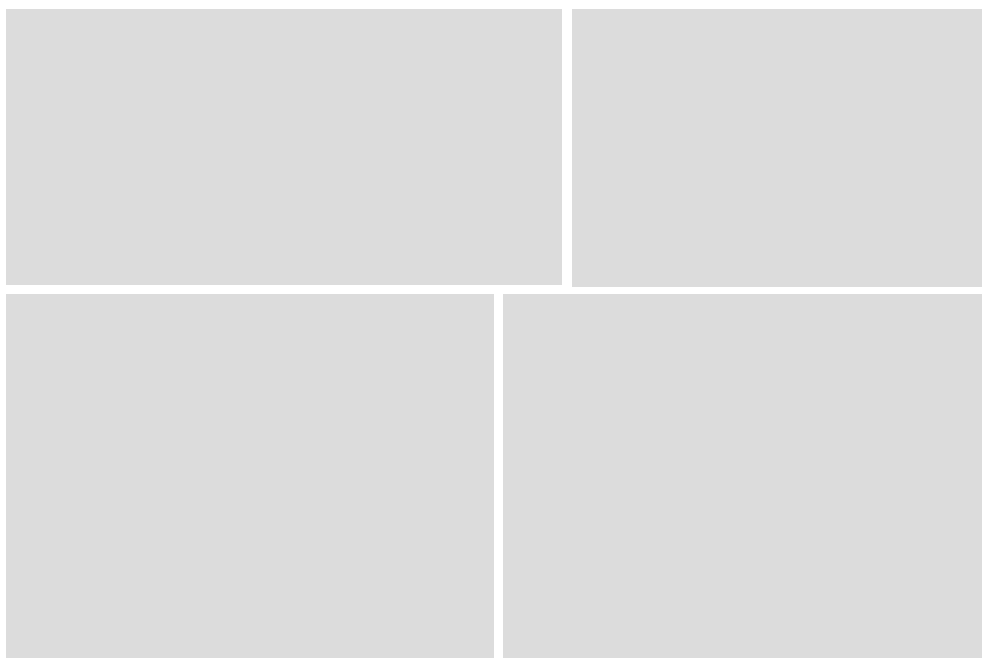
Post-occupancy > Manuals & toolkits

The methodology and design strategies were published in the guide '*Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective*' (see More information).

W16 COEDUCATIVE PLAYGROUNDS



Different moments of the analysis and design process.



Top: some executed interventions. Below: mural painting with the assistant of the artist Perrine Honoré (right picture by Clara Antón).

OUTCOMES

The coeducative playgrounds project successfully involved six schools in a process of co-diagnosis and co-design of outdoor facilities that aimed to improve the gender perspective balance and inclusivity in the use of space. The different activities organised by the architects enabled conversations with different stakeholders, including children, in the process. In this regard, it is important to underline the pedagogical impact of the process as an outcome in itself, in transmitting the project's values in children in two ways. On the one hand, it addresses the issue of the design of public space being developed by and for male-driven activities, a critique that entails the reading of public space as an inclusive space, thus avoiding the dominance of certain activities and user profiles. On the other, in terms of the process of decision-making, it increased children's perception of their rights and responsibilities in urban governance from an early age.

An internal review of the process was developed by architects and by Dafne Saldaña as part of her PhD research (Saldaña, 2020), concluding that the transformation produced a more equitable distribution of space, a greater diversity of play options and an improvement in habitability and comfort. However, the administration, as a procurement agency, commissioned neither a process review with users nor the monitoring of the use of the space. Despite the observation that the space seems to perform excellently, this issue raises the need to include a post-occupancy evaluation of the architect's intervention as part of the project commission. This could have been developed through an ethnographic observation of the way the space performed before and after the intervention, as well as interviews with participants concerning the use of the space and their perception of it. The lack of these documents can be seen as a missed opportunity, the learnings from which could have been incorporated in further projects, that potentially could have encouraged other schools to replicate the transformation of the playground. In this regard, the publication of the process in the form of a toolkit was a relevant contribution to the improvement and replicability of the system.

More information:

Arqbag, Vilajoana, A. and Cerri, S. *L'Escola Expandida. Repensem els Espais d'Aprenentatge*. Barcelona: Pol·len Edicions.

Equal Saree (2017) *Inclusive School Playgrounds: a Guide to Diagnosis and Intervention with a Gender Perspective*. Barcelona: online publication available in multiple languages at www.equalsaree.org.

Saldaña Blasco, D., Goula Mejón, J., Cardona Tamayo, H. and Amat García, C. (2019). *El Pati De L'escola En Igualtat: Guia De Diagnosi i D'intervenció Amb Perspectiva De Gènere*. Barcelona: Pol·len Edicions.

Saldaña Blasco, D. (2020) *El Espacio como agente coeducador*. PhD thesis. Universitat Politècnica de Catalunya, pp.262 and 264. Available at: www.tesisenred.net.

www.equalsaree.org/project/empatitzem

www.gramenet.cat/ajuntament/arees-municipals/educacio/projectes-educatius/empatitzem

Images: courtesy of Equal Saree.

STAKEHOLDERS

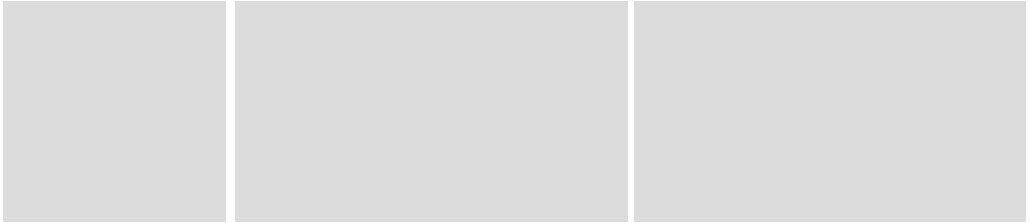
Civic engagement	Inhabitants of Bocachica Village
Public administration	Colombian Ministre of Culture
Community architects	Local universities: U. Tadeo, U. Pereira, Pei.Lab and Nuevos Territorios Universidad Javeriana de Bogotá. Spanish Collectives Arquitectos de Cabecera and Zuloark

CONTEXT & AIMS

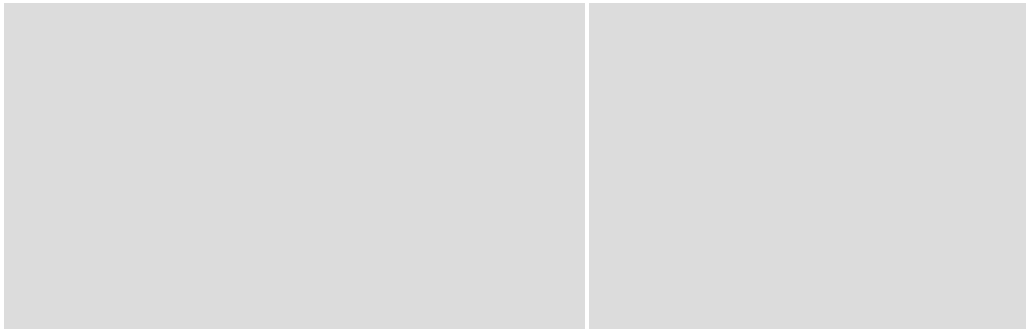
This project responded to an invitation from the Colombian Ministry of Culture and Heritage to Colombian schools of architecture to prepare a design for a historic colonial fortress to host the closing event of their National Heritage Conference in 2016. In turn, the local architecture schools invited Spanish architects' collectives to participate. The constraints were its nearly zero budget and the restriction on making any permanent intervention – even one as small as a nail – to the listed fortress. The contradictions at the site were obvious from the beginning: the fortress was close to Bocachica, a town of 10,000 inhabitants who felt alienated from the military building, who live in informal housing settlements where streets have neither pavements nor lighting. Surprisingly, a gas infrastructure was under construction in a village that had no gas household appliances and no public water supply infrastructure (water was supplied by tank trucks). It turned out that, through public subsidies, investors were preparing to develop the area for tourism. In other words, the planned interventions did not take account of the needs of the actual inhabitants of Bocachica, or offer any benefit to them.

The temporary appropriation of the fortress for the event became an excuse to demonstrate local social demands and attempt a long-term impact. The short-term strategic aim was to change the Bocachica citizens' perception of the fortress as an institutional military government building to one of a local facility hosting cultural events. The physical utilisation of the space had three strategies: to domesticate an uncanny space by turning it into a living room using broken furniture which was provided by the locals as a barter for mending it; to protect the area from the strong sun with shade, using cables and umbrellas; and to buy some trees with the limited available budget to provide shade in the future for a social meeting place .

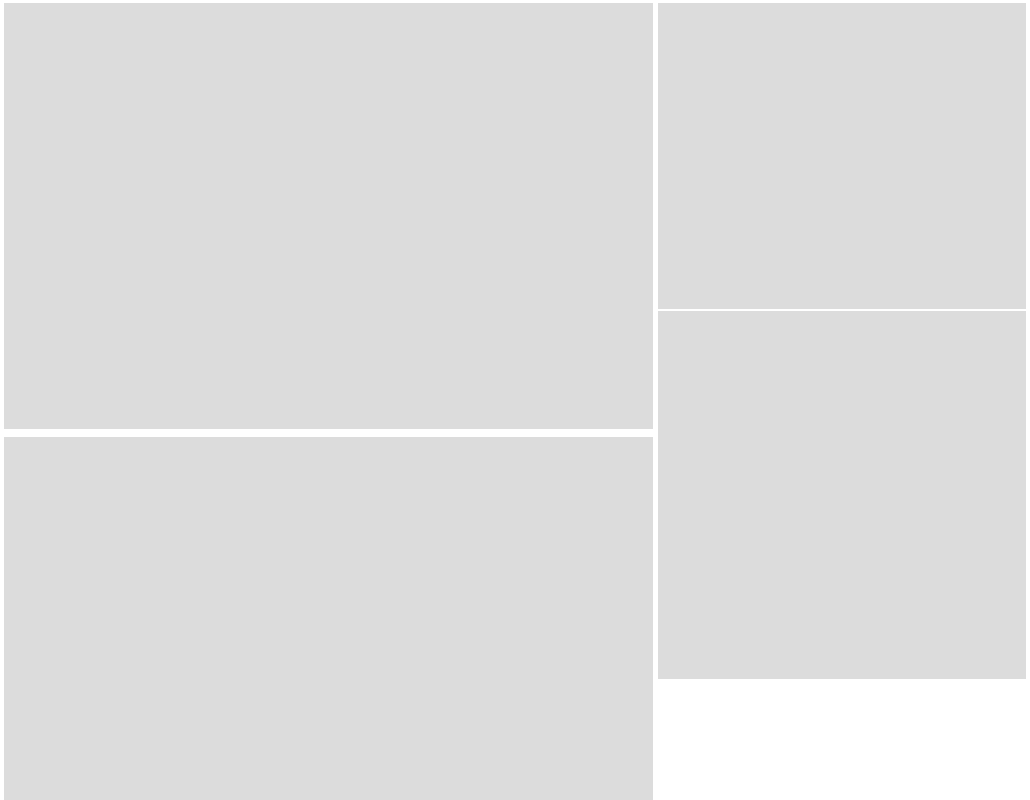
The long-term strategy consisted of connecting a disused fortress, the national heritage institution that manages it and the Escuela Taller Cartagena de Indias, which runs the Taller de Carpintería de Ribera (Boat-building Carpentry Workshop). Escuela Taller has been organising training workshops in the fortress since 2016 as part of the adoption of traditional Caribbean wood construction for boats, houses and furniture.



Contrasting situation between a historical military fortress (left) and the neighbouring fishermen village of Bocacheica (right).

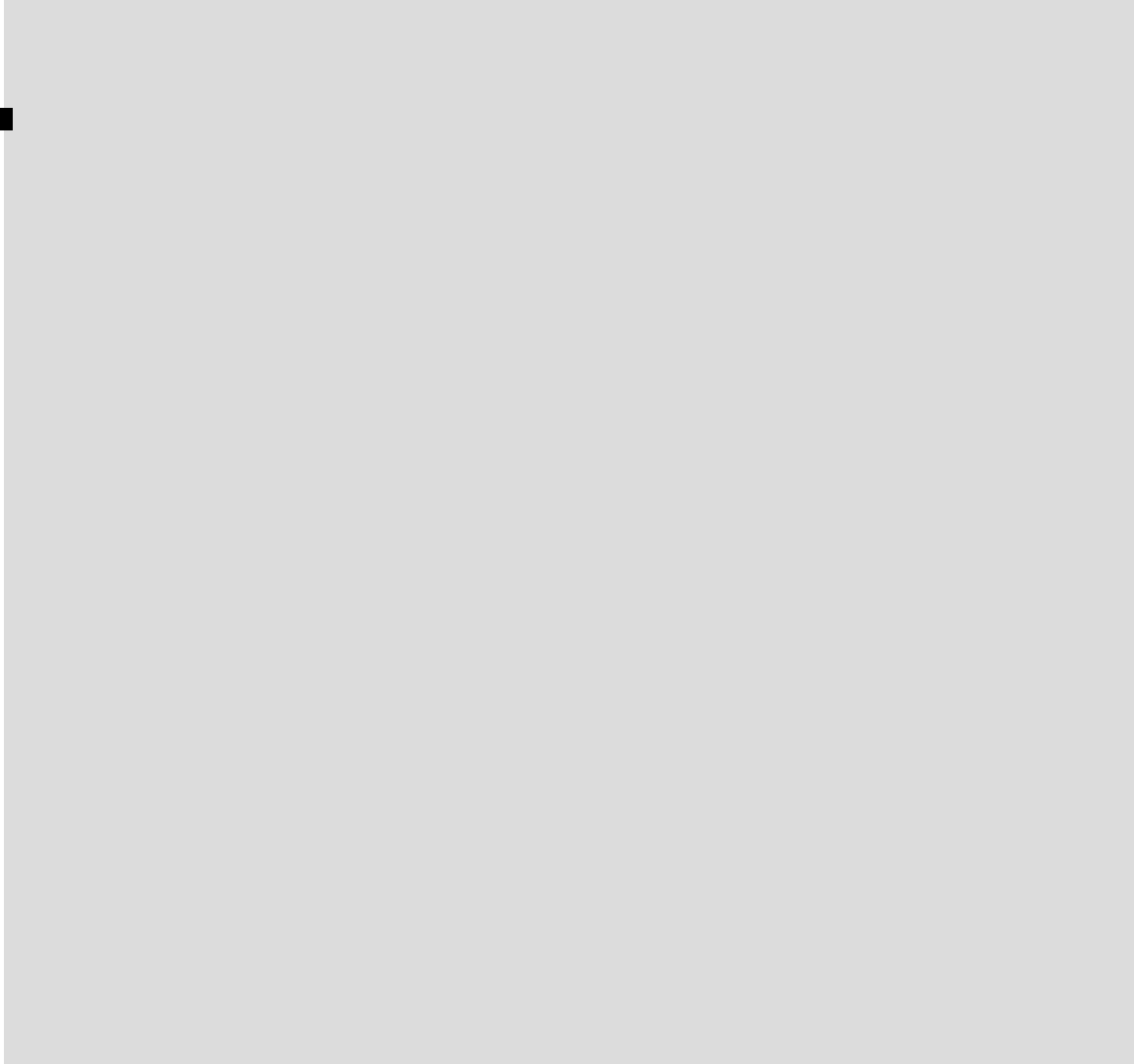


Reaching local villagers was achieved through organising activities with the primary school.

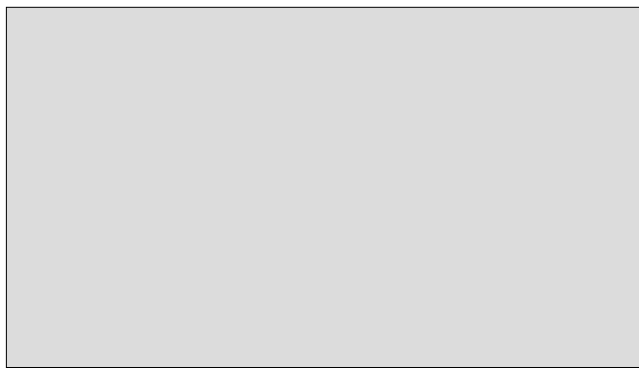


Construction with low-tech and furniture refurbishment.

W17 BOCACHICA



W. WORKS | FACILITY



The Bocachica Manifesto organised work groups to address local problems.

COLLABORATIVE TOOLS

Invitation as part of public agendas

The Colombian Ministry of Culture and Heritage commissioned local schools of architecture to prepare a colonial fortress to host the closing event of the National Heritage Conference.

S22

Stakeholders > Indirect contact

Local people were reluctant to get involved in a participatory diagnostic phase. Reaching adults was achieved through firstly organizing workshops with children of the primary school

**G11
G22**

Data gathering > Ethnographic observation + Meetings with stakeholders

Ethnographic observation and meetings with stakeholders allowed to recognise the problem of water infrastructure and the opportunity of the event to make visible local claims.

E21

Execution > Borrow - barter

Broken furniture was borrowed from neighbours in exchange of returning it fixed once the event concluded. Participation in the restoration furniture workshop raised interest in the event.

D33

Design > Designing for low-risk construction

Given the listed category of the fortress that precluded hanging a single nail and the aim to involve locals, a low-tech construction method was chosen, which allowed children to co-construct.

E35

Execution > Collective assisted DIY-DIT

The conditioning of the fortress for the event was executed by workshop participants (students and tutors of schools of architecture) and local children.

A11

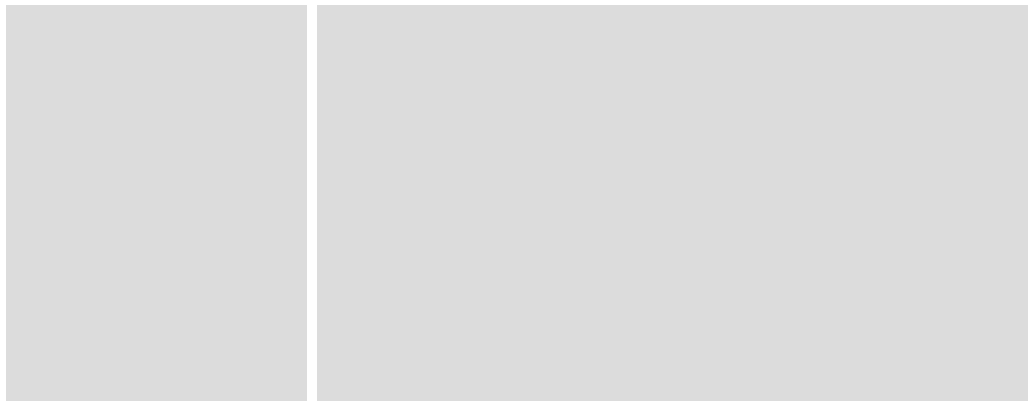
Analysis & Strategy > The (yellow) manifesto

Resulting from the conference, la Carta de Bocachica (The Bocachica Manifesto), became a roadmap agreed by institutions and locals to foster a socially, politically and economic sustainable development of the region.

**E41
E12**

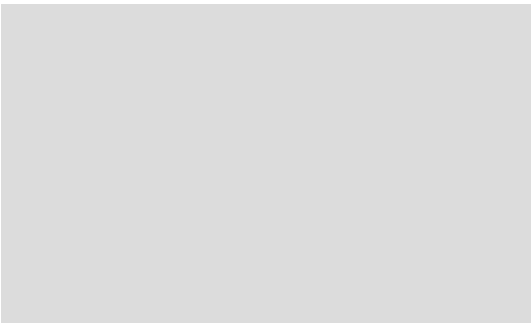
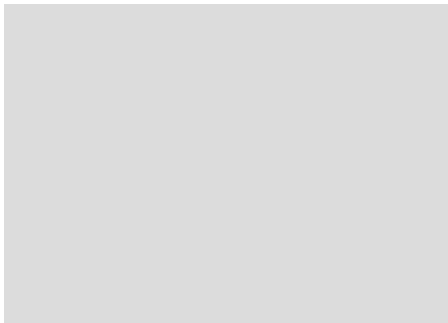
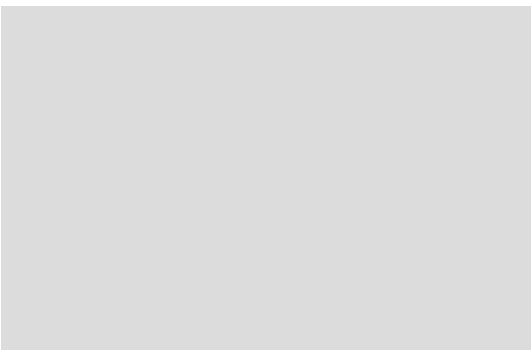
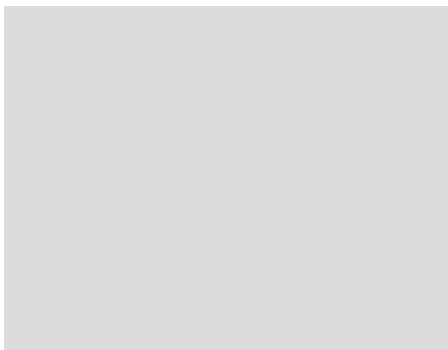
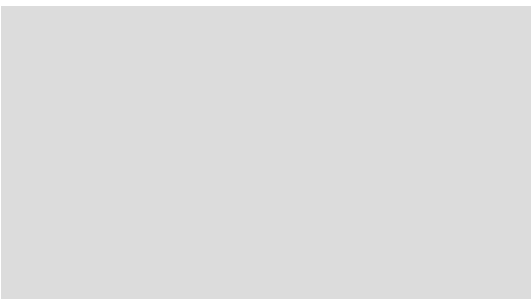
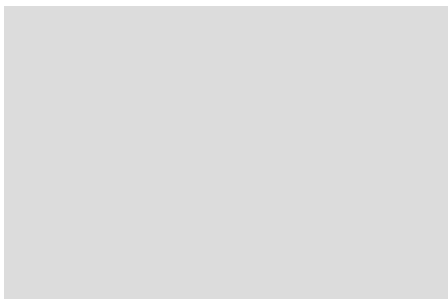
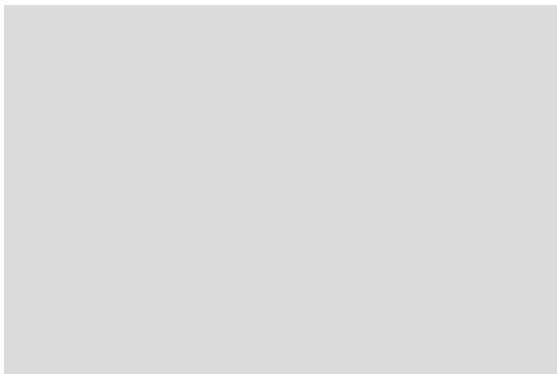
Execution > Generative action + Do not do (II): connect

The event became a catalysing action to connect the national heritage institution who manages an obsolete fortress and Escuela Taller Cartagena de Indias. The result was that the later organises carpentry workshops in the fortress since 2016.



Furniture reparation in the fortress (left) and in the village under a tree (right). In Cartagena de Indias, shadows become crucial urban elements for gathering and socialization.

W17 BOCACHICA



W. WORKS | FACILITY

Pictures from the final event of the National Heritage Conference in the fortress, with repaired furniture. In the top image: "Bocachica without water, without assistance, with gas", in the tripods that protected the trees that were to be planted in the village for future shadows.

OUTCOMES

The success of the Bocachica project exceeded all expectations. On the day of the event national authorities and local people gathered, traditional events took place and the official speeches were followed by the Bocachica Charter, which stated locals' demands and enabled the creation of working groups.

During the preparation for the event, the different strategies to overcome the initial limitations were successful. An example of this was the overcoming of the reticence of the adult community and reaching them through children. Another example was to involve locals in the preparation for the event, including the construction phase, and to borrow broken furniture to encourage locals to attend the event. Most importantly, the instrumentalisation of a singular event – the closing event of the National Heritage Conference – to make visible local demands about the unequal development of Bocachica village, and the need to develop a long-term plan, translated into the Bocachica charter.

On the other hand, and as a result of the workshop, the Carpinteria de Ribera (Ribera Carpentry Workshop) has been organising training in the construction of models and the restoration and building of traditional boats which were used to connect the island with the city of Cartagena, transporting people and goods. This has changed the use and understanding of the building from an disused military building to a local facility, in the perception of both local people and the municipal administration, and is having a positive impact on the social and economic network of Bocachica village.



Boat building carpentry workshops organised in the fortress by Escuela Taller Cartagena de Indias, ongoing since 2016.

[More information:](#)

www.arquitectosdecabecera.org/AC/en/portfolio/bocachica

Images: courtesy of Arquitectos de Cabecera.

STAKEHOLDERS

Civic engagement	Group of teenage skaters
Public administration	Municipality of Arbúcies
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Idensitat art project
Private	Voluntary collaboration of a private local construction company

500 m², 40.000€

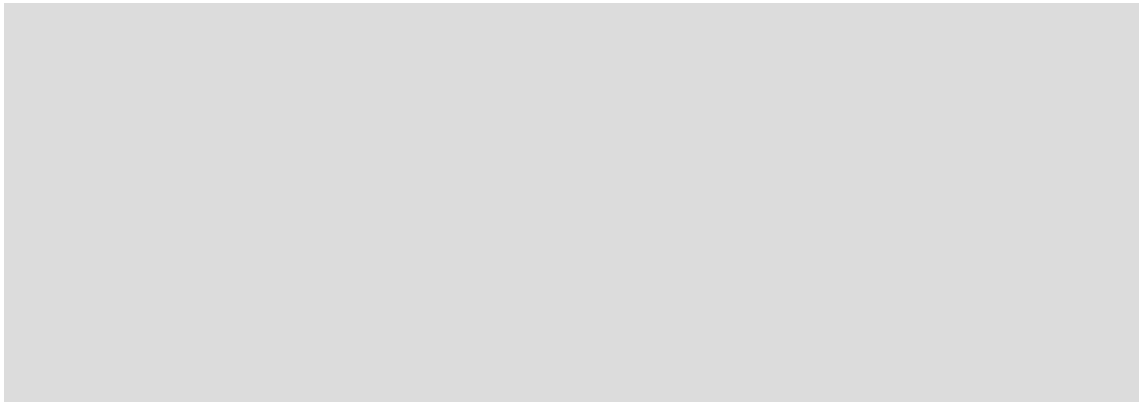
CONTEXT & AIMS

The SK8+U project consisted of the construction of a skate park with a tight budget in Arbúcies, Catalonia, led by its future users – a group of teenage skateboarders. In the spring of 2011, the potential skate park users contacted political parties during the election campaign period, as well as local residents and members of the Straddle3 architecture practice. They aimed to build facilities for skateboarding and other sporting activities such as scooter-riding and BMX cycling, a sport that is often played with passion and functions as a signifier of identity. This initiative was approved by the municipality, which offered the land and allowed users to take the lead in the process. SK8+U won the 2012 iD Sport award [Sport, Art and Social Inclusion], promoted by IDENSITAT and the national Consejo Superior de Deportes (Sports Council), which granted some funding for the project.

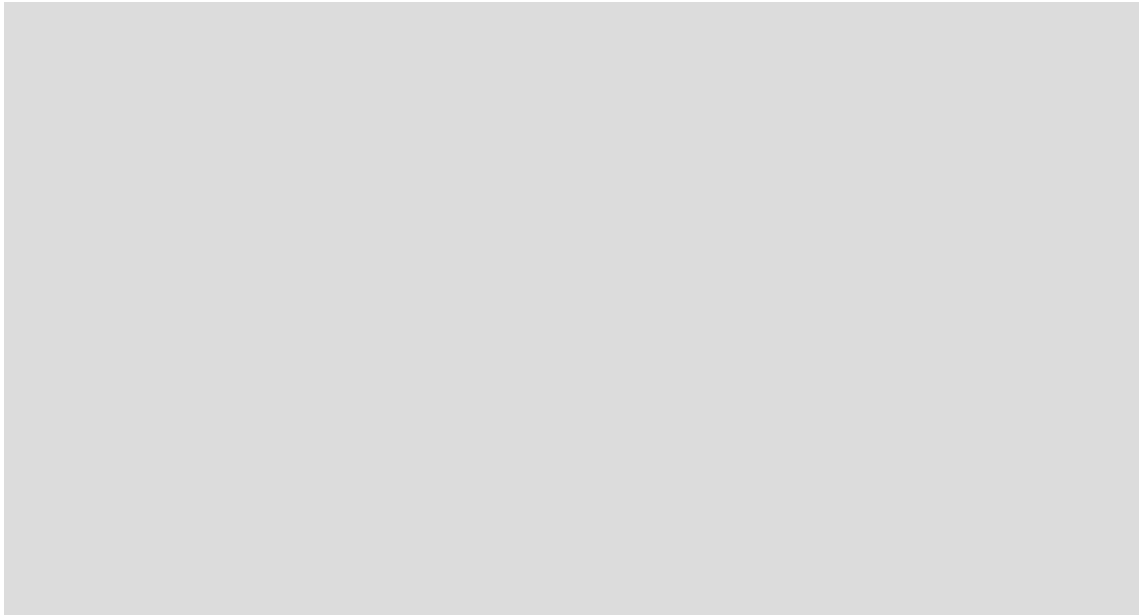
The project was carried out through a radical participatory process, which combined different creative disciplines, materials recycling and diverse collaborative dynamics. It involved future users, especially the youngest, in the possibility of urban transformation and the maintenance of spaces through the means of collaborative design, shared management, social communication and a self-build approach.

The project made the most of the input of the stakeholders involved, as well as becoming an exercise in the optimisation of resources and processes. The project was the result of adapting the programme proposed by the skateboarders to the specific site conditions, reusing surplus material and with little budget allocation. The construction work was carried out through a combination of self-build workshops, carried out with people with different levels of experience, and interventions by professionals and experts. One of the main points of the proposal was the use of second-hand materials, such as a shipping container bought for the price of scrap. The container served several purposes simultaneously: support for the earthworks and ramps, living accommodation, warehousing, facilities for workshops and/or social activities. In addition, prefabricated concrete, wooden frames and various metal elements were used in order to save costs.

– Information from Straddle3 website, adapted by the author.



Areal view of the area.



Sk8+U as finished.

W18

SK8+U ARBÚCIES

COLLABORATIVE TOOLS

M32

Process management > Involving decisive partners

Administration responded to the demand with a public plot and allowing users to develop the project.

G22

Data gathering > Meetings with stakeholders

Meetings between different users and the municipality allowed to reach an agreement for the development of the project.

A21

Analysis & Strategy > Financial analysis & co-finance strategies

The project was financed with an external award, the 2012 iD Sport Award [Sport, Art and Social Inclusion], promoted by IDENSITAT and the Consejo Superior de Deportes (Sports Council).

**D11
D33**

Design > Co-design workshops + Designing for low-risk construction

Design was agreed between users, technical staff and the municipality. Low-risk construction methods were considered from the early beginning.

E22

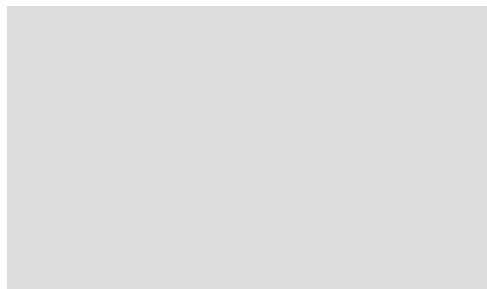
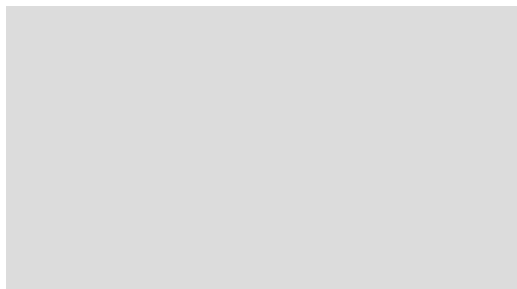
Execution > Recycling & reclaiming components

Construction materials arrived as leftovers from the construction of the Eix Transversal road.

E35

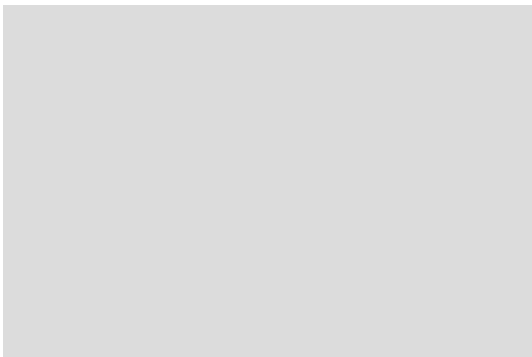
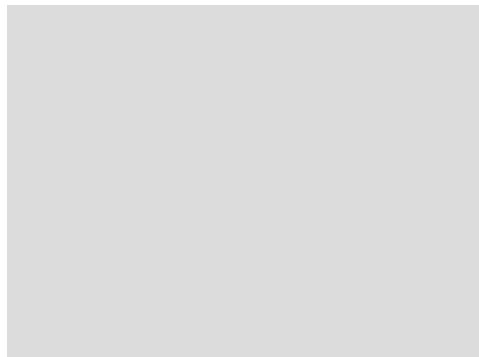
Execution > Collective assisted DIY-DIT

Users executed construction works assisted by technical and professional staff.



Left: "The intention [to build the skatepark] is double, both of municipality and yours. So let's do it together (...). That's why we need an agreement." Pere Garriga, Mayor of Arbúcies (centre table), in the meeting with users and technical staff.

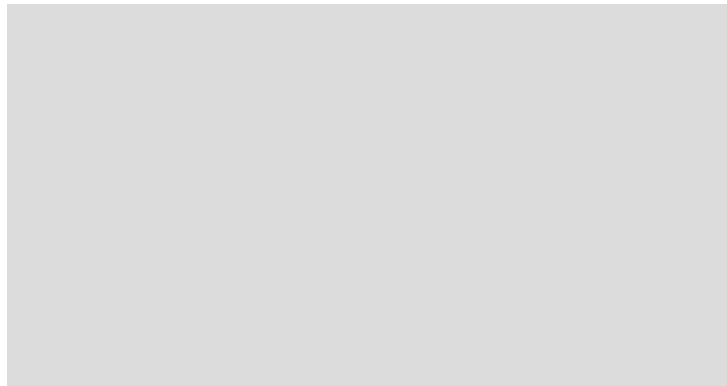
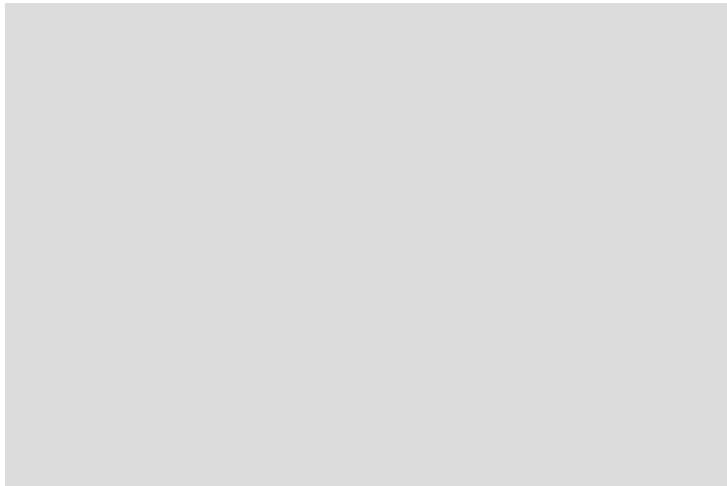
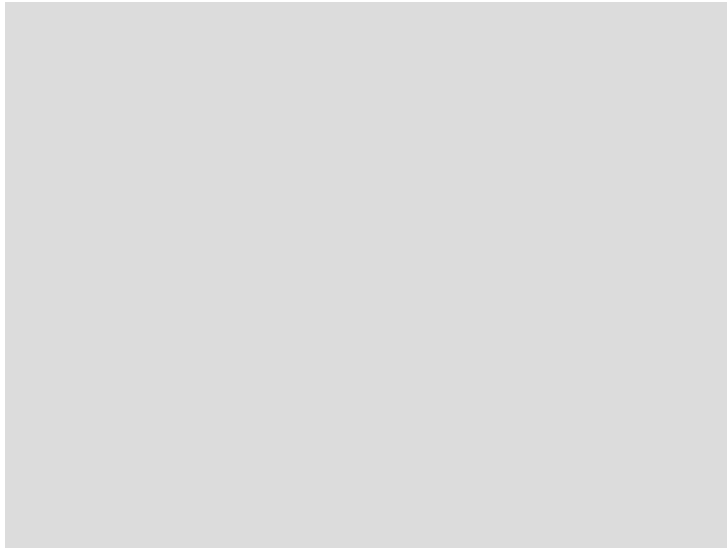
Screenshot from https://youtu.be/ux1mR_gFPcU. Right: Co-design process.



Co-construction stage.

W18

SK8+U ARBÚCIES



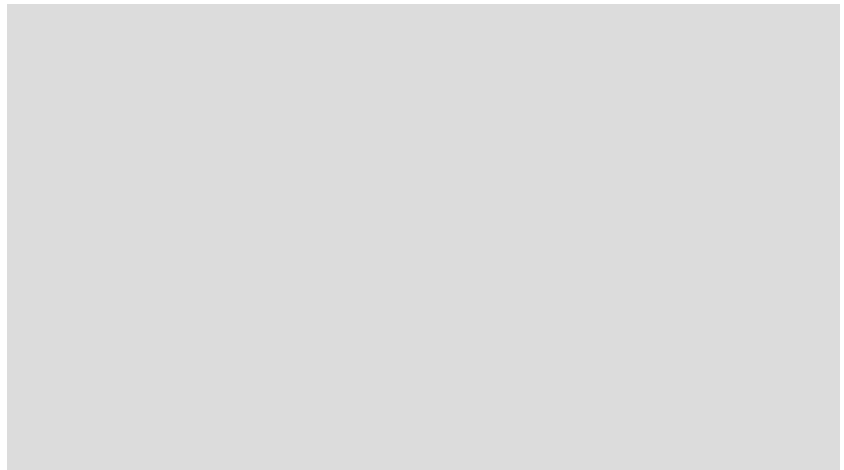
Co-construction stage.

OUTCOMES

The project became very successful in terms of both process and result and engaged the local population, which included the architect. The role of the municipality in providing the land and enabling users to take the lead became crucial. However, this was only possible through the great effort of users and technicians, the volunteering of skills by a local construction company and the donation of materials.

The process was developed rapidly, for external reasons. On a positive note, short processes prevent the participants becoming exhausted or losing interest, as acknowledged by the architect David Juarez in conversation. Since relying on volunteers may not be sustainable for developing the project if too much effort is required from participants, it may need to look for formulas that include a larger proportion of municipal support or financial mechanisms (see la Santa (W19) and Workers' Movement Square (W20) case studies). This situation raised questions about the co-responsibility of public provision of facilities in terms of budgeting, leadership, and dedication.

Despite their youth, the involvement by users was consistent at all the stages of decision-making, including the initial demands, co-design, and co-construction. Some elements, such as the central pyramid (a skateboarding obstacle) was not something the architects wanted in the design, but it was eventually built, as users considered it a fundamental element of the space. Sk8+U became a very well-frequented space; users' involvement in its procurement translated into an emotional attachment to, and care for, the space.



Sk8+U as finished. Note that the ramp is placed on the side of the shipping container.

More information:

www.straddle3.net/en/proyectos/sk8u

www.vimeo.com/52870814

www.youtube.be/ux1mR_gFPcU

Images: courtesy of Straddle3.

STAKEHOLDERS

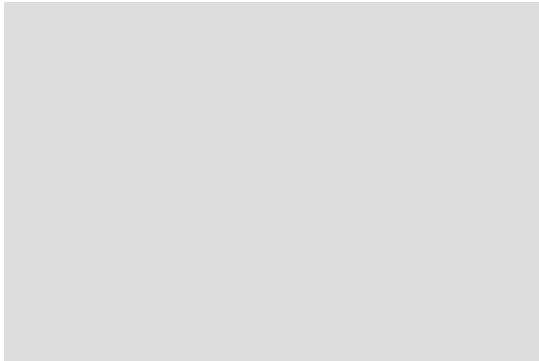
Civic engagement	Collective of young skaters
Public administration	Municipality of Santa Coloma de Gramenet
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Lur Paisajistak and Lea Atelier (landscape)
3.000 m ² , 190.000€	

CONTEXT & AIMS

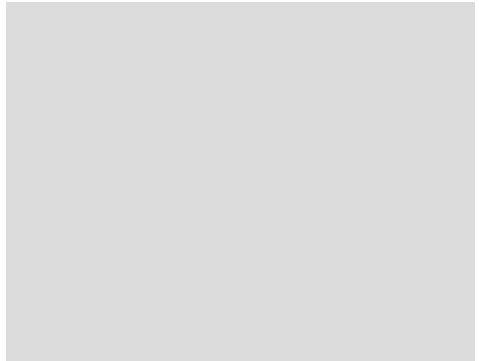
"Is there a better expert than the user?"

La Santa skate park design involved the design and construction of a sports area in Santa Coloma de Gramenet, in the metropolitan area of Barcelona. A group of skateboarders in their twenties were lobbying both for a larger skateboarding facility, as the one built in 2007 was proving inadequate after a decade, and to be included in the design process. The municipality responded by offering a nearby plot of land and municipal resources and allowing the users and a team of technicians to lead the process, consisting of the architectural practice Straddle3, the skate park designer Sergi Arenas and the landscape team Lur Paisajistak. The co-design process included bi-weekly workshop sessions. These sessions established a framework of priorities that led to a planned range of uses for the park, which had to be resolved in different phases, due to budget constraints. The project that resulted from the "participatory process" included a pedestrian area, a skate park, an outdoor gym, a bike park, as well as an area dedicated to car parking. The first phase included the new pedestrian area and a multipurpose skate park, suitable for use by people playing various urban sports. In meetings with the municipal staff involved, the methodology went well beyond the original expectations of the project and the concept of citizen participation: from the development of the planned use and design to the construction of the park itself. This situation established a mixed dynamic between infrastructural works and basic urbanisation to be carried out by a contractor, and another set of projects to be developed by the management team and future users in the form of self-build workshops. These included both skateboarding facilities as well as gardening and replanting specimens from nearby unused plots of land. Reclaimed material included building materials and plants from abandoned areas - what Gilles Clement calls "the Third Landscape". One of the main conditioning factors of the project is the practice of self-building, together with the use of recycled materials. This can be found, on the one hand, in the skateboarding area with the use of metal profiles and in the prefabricated concrete obstacles. On the other, it can be seen in the pedestrian area where the benches are made of old counterweights of concrete, the islands are decorated with laminated bamboo (recovered from temporary installations) and the pergola-lamppost was built reusing former traffic lights.

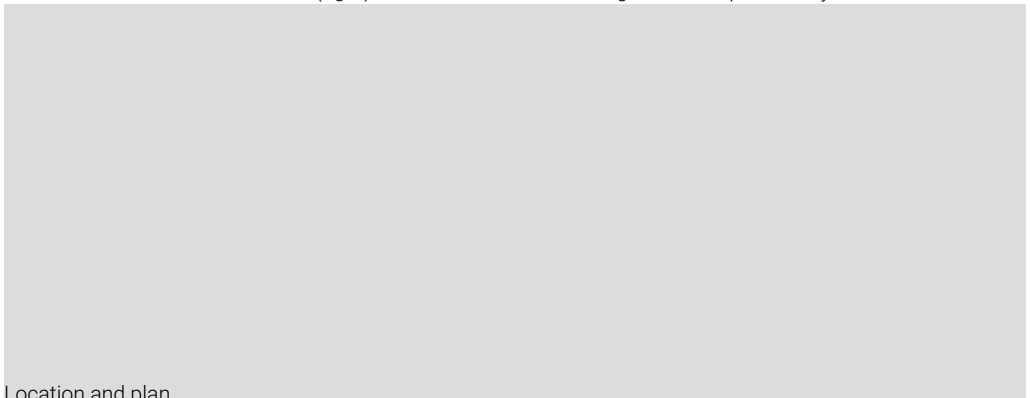
— Information from the architects' website, adapted by the author.



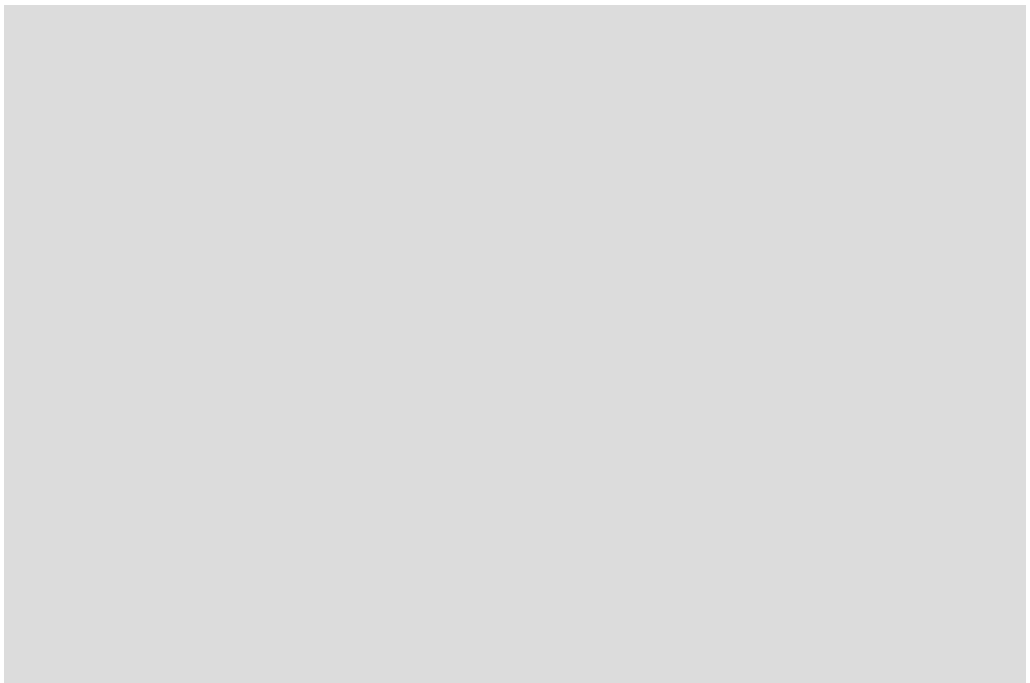
Location of new and old facilities (right).



Relatogram of the process by Carla Boserman.



Location and plan.



Construction as finished.

W19

LA SANTA URBAN SPORTS PARK

COLLABORATIVE TOOLS

**M32
D51**

Process management > Involving decisive partners + Design > Reclaiming empty plots

The existing skatepark proved too small; a nearby unused piece of land next to sports facilities was reclaimed by a group of teenager skaters. Administration responded to the demand with a public plot and municipal assistance, for example in the hiring of technical staff and construction company. However, it allowed users to lead the process.

**S42
S43**

Stakeholders > Printed media + Digital platforms

A public campaign to reach a broader audience included printed and digital media, including the website (www.sk8sc.net, discontinued) and social networks.

**G12
G22**

Data gathering > Group walk + Meetings with stakeholders

Site visits with users and meetings with stakeholders allowed to identify areas where the project could be developed, and their intended uses.

C35

Projective cartography > Memory

Graphic designer Carla Boserman developed relatograms in which the process was explained. See www.carlaboserman.net.

A23

Analysis & Strategy > Available resources (II): "harvest map"

The lack of resources induced searching for materials to be reused both for construction and gardening in unused plots.

D11

Design > Co-design workshops

Co-design workshops took place bi-weekly in order to establish the plan of uses and design of elements for the park, as well as to define priorities.

D34

Design > Split large interventions

The lack of funding did not allow to intervene in the 8.000 m² of the plot. The masterplan was split and a first intervention of 3.000 m² was developed.

Construction through public tendering

The construction of the elements below ground level 0 was developed by a professional company through public tendering.

**E32
E35**

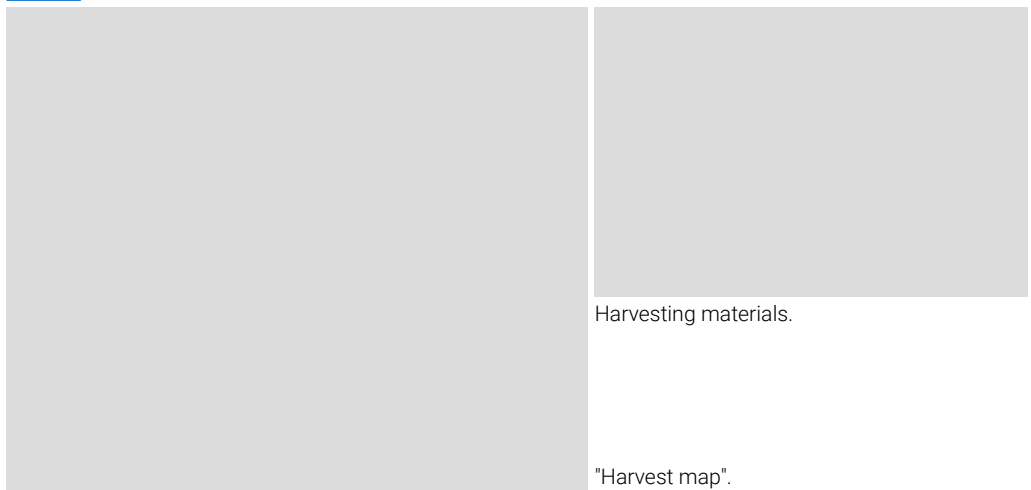
Execution > User to execute + Collective assisted DIY-DIT

In parallel, all the elements above level 0 were built by users with the assistance of technical staff, in a "do-it-together" process.

E22

Execution > Recycling & reclaiming components

The pergola was built recycling traffic light posts and metal construction fences. The structure was prepared in a workshop and placed on site by users.

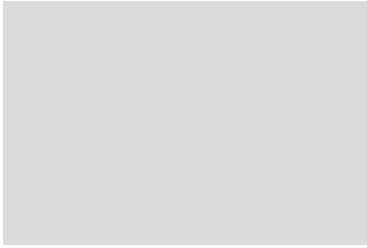


Harvesting materials.

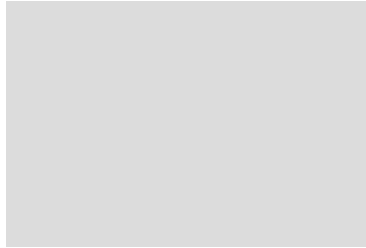
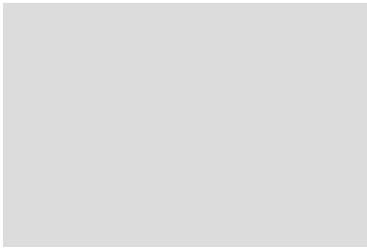
"Harvest map".

W19

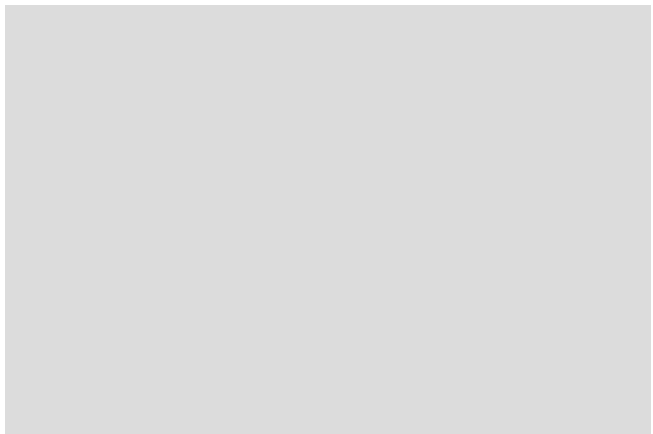
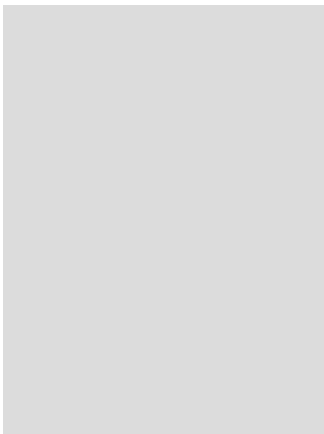
LA SANTA URBAN SPORTS PARK



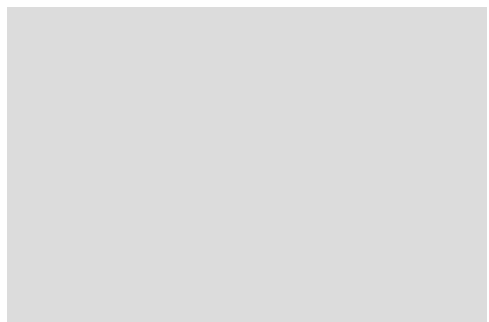
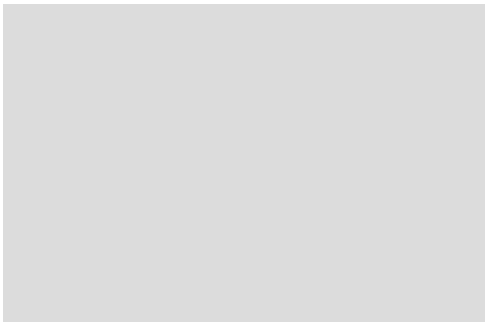
Co-design workshop.



Gardening workshops.



Co-construction.

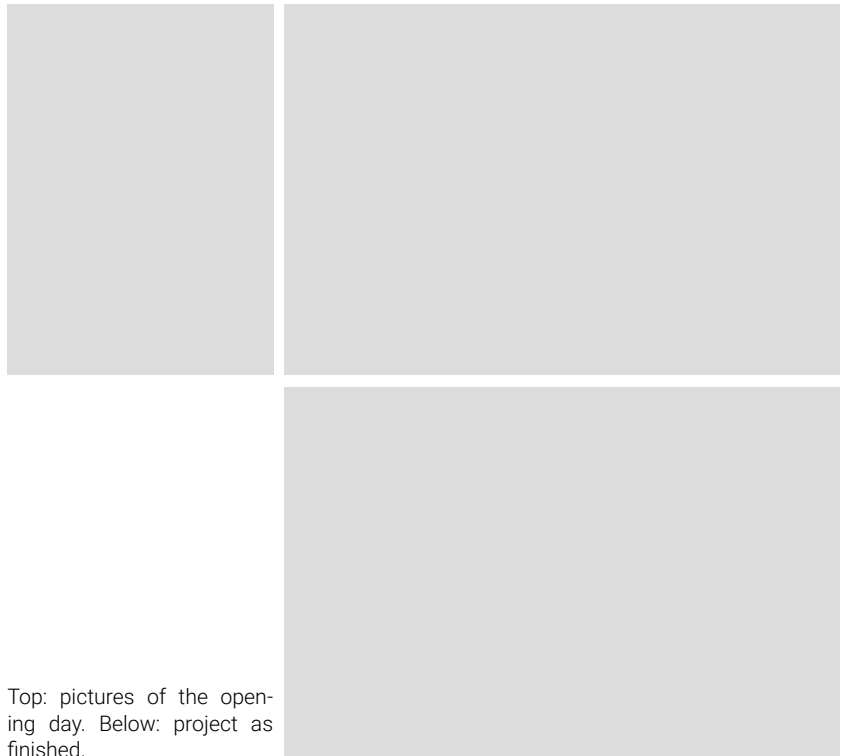


Pergola in workshops (professional construction) and on-site installation.

OUTCOMES

La Santa, an urban sports park, represents an intermediate situation in terms of complexity and involved stakeholders from Arbúcies skatepark (W18) and Workers' Movement Square (Plaça del Moviment Obrer) in Barcelona. The project was successfully achieved through its dual context: this was, on the one hand, the social requirements of a group of young skateboarders in their twenties, while on the other it was the enabling response of the municipality which did not maintain control of the process. Thus, the administration crucially allowed users to take responsibility and provided the necessary means for its realisation. In this regard, the architect David Juarez emphasises that the result could only have been achieved with the strong commitment of participants in all the phases, including design and construction. The construction made the most of two construction logics: professional construction for the elements below ground, while those above ground relied on users.

The design was open to users' input: for example, in the case of the pergola, which exemplifies the construction logic of the whole process: the structure was professionally manufactured in a workshop and the installation relied on users; both elements were recycled materials: traffic-light posts and construction site fences.



Top: pictures of the opening day. Below: project as finished.

[More information:](#)

www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina

Images courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	Neighbours of the district, specially the neighbourhood of la Marina La Marina Patina (skate collective)
Public administration	Technical staff of Pla de Barris, Foment de Ciutat SA, and district. BIMSA (municipal construction developer).
Community architects	Straddle3 (architects) and Sergi Arenas (skatepark designer)
Technical staff	Lur Paisajistak and Lea Atelier (landscape)
6.000 m ² , 1.0000.000€	

CONTEXT & AIMS

"Can neighbours improve a Pritzker prize design?"

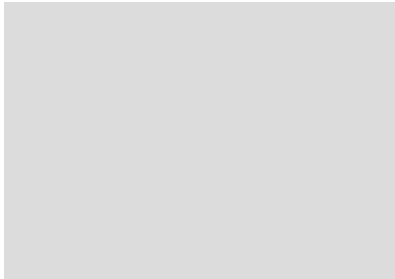
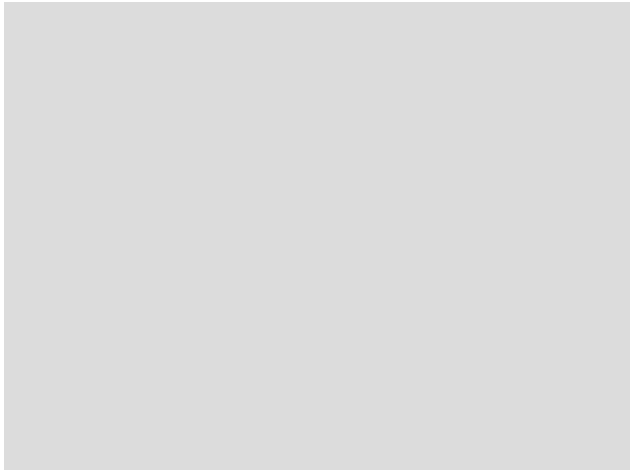
Moviment Obrer Square entailed the rethinking and redesign of a recently built public space, designed by Toyo Ito Associates and Óscar Tusquets, that was never heavily used, to incorporate a social demand that emerged from the consultation process of Pla de Barris (Neighbourhood Plan) to build a skateboarding area.

For this purpose, a roadmap, a participatory methodology and the drafting of a preliminary project were proposed. These would involve the neighbourhood, specifically the skateboarding collective La Marina Patina, in the development of a project to boost the area. The intervention included events in the neighbourhood that combined dissemination, participation and sports, and involved recycling the spiral motifs and eye-shaped outlines used in the original design by Ito and Tusquets.

The strategy took into account the need to maintain close collaboration between the existing associations in the region and the different municipal entities. To do so, during the initial phase of the process multiple dissemination activities were carried out, including visits to secondary schools in the neighbourhood and the municipal market square. At each event, a skateboarding exhibition was held to make the process visible and to encourage potential participants.

In four workshop sessions with residents, a blueprint was created to define three differentiated spaces for the square: an area for intensive use and skateboarding, an unobstructed space for beginners, and an area for general use, presided over by a large pergola and surrounded by a restored group of trees. The design that was proposed is based on the conservation, transformation and interpretation of the existing traces of the previous approach to the public space, avoiding the unnecessary introduction of new design forms.

— Information from the architects' website, adapted by the author.



Plan and analysis of existing area as designed by Toyo Ito and Oscar Tusquets.



Plan and axonometry of the proposal.

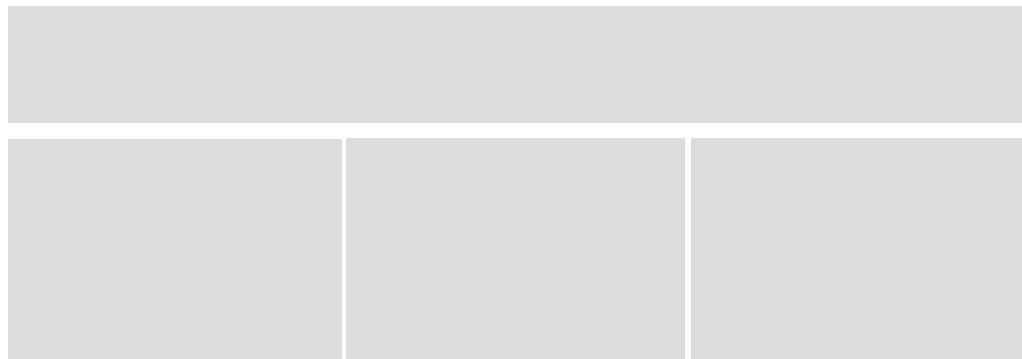
W20 MOVIMENT OBRER SQUARE

W. WORKS | PUBLIC SPACE

Artifact invades public space: on-site tactical and temporary intervention to make the project visible.

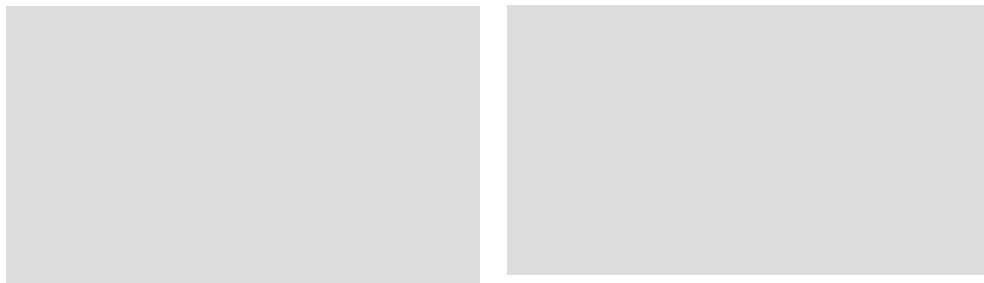
COLLABORATIVE TOOLS

- D51** **Design > Reclaiming empty plots**
The area had been executed a decade before. Neighbours claimed both a skating facility as well as an improvement of the design of the area, a claim that was incorporated in the Neighbourhood Plan.
- Administration management**
The project was led by the administration, who invited the architects to design the project along with neighbours. Unlike Arbúcies and la Santa, this process was conducted by public administration.
- S42**
S43 **Stakeholders > Printed media + Digital platforms**
Reaching stakeholders through different platforms: website, printed media, digital platforms. In addition, some informative sessions took place in local schools.
- S31** **Stakeholders > Artefacts invade public space**
A skate ramp was installed in Marina square. This tactical action was located in a nearby populated square, rather than on the site of the future skatepark, which had little activity at that time.
- G21** **Data gathering > Diagnostic workshops**
The first of the four workshops consisted in an explanation of the process, and interviews and questionnaires to determine the profile of users and disciplines: scooter, skate and rollers. Rather than "advanced" young skaters, most users belonged to families and different ages.
- C15** **Projective cartography > Urban void**
The existing space was analysed in terms of circulations, geometry and uses. Both circulations and geometry were incorporated to the new design.
- D11** **Design > Co-design workshops**
Three co-design workshops took place, each of them with 20-30 participants. Sessions started in the square and then continued in a nearby public facility. The first session was dedicated to general proposals, which were discussed in more detail in the second one. Architects matched users' proposals with the preexisting design of Toyo Ito with curve geometries. In the last workshop session, minor adjustments were double-checked before the design of construction plans.
- Construction through public tendering**
The execution of the project was developed through standard mechanisms of public tendering.
- E22** **Execution > Recycling & reclaiming components**
A report on the co-design and co-construction process for a urban skatepark is available at: www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina
- P13** **Post-occupancy > Internal evaluation: tools & methods**
An internal evaluation was performed as part of Pla de Barris (Neighbourhood Plan), developed by the administration.

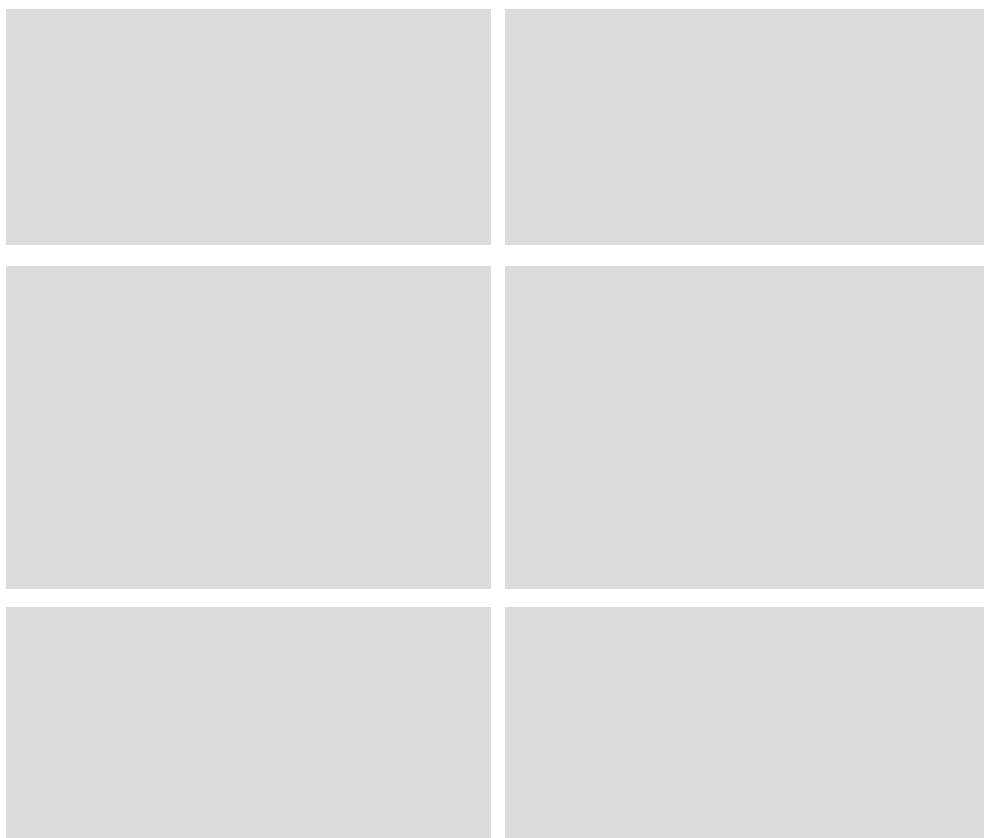


Co-design workshops with users.

W20 MOVIMENT OBRER SQUARE



The use of plasticine in co-design workshops enabled communication between technical staff and users, as well as allowed to represent complex geometries. Co-design workshop outcomes were simulated with a virtual model.



W. WORKS | PUBLIC SPACE

The square as finished.

OUTCOMES

After Sk8+U (W18, 500 m², 40.000€) and la Santa (W19, 3000m²,190.000€), Workers' Movement Square (Plaça del Moviment Obrer, 6.000 m², 1.0000.000€) exemplifies the scalability of a process in terms of both budget and size. Like the two experiences above, Workers' Movement Square started with a social demand noted by the municipal administration: in this case it was incorporated into the Pla de Barris (Neighbourhood Plan). However, unlike Sk8+U and la Santa, the size of the project and its status as part of municipal development plans entailed public management of the process and the intervention of many different municipal departments. Design workshops enabled effective communication between professionals and users. In this regard, the use of an unusual material for architecture models, plasticine, became an easy tool for communication between professionals and users to represent complex geometries. Emphasis was placed on the understanding of different users' profiles, mostly families and amateurs, and different kinds of activities with distinct requirements: scooters, skateboards and roller skates need different kinds of slope and sizes of obstacle. Concerning the design process, the architect David Juarez from Straddle3 acknowledges they expected more people in the sessions. The tactical action of building a temporary skate park in Marina Square became an effective instrument to make the process visible. During discussions, certain elements of the construction were directly proposed by residents in the co-design workshops: for example, the pergola, which substituted trees for the preferred option of the architects. The architects recognised the positive impact of users as design informants, including the proposal of the pergola as an improvement to the original design. At the end of the process, a group of "advanced" young skateboarders who use other spaces of the city showed up, claiming they had been excluded from the process as the media campaign had been limited to the immediate neighbourhood. A session was organised to offer explanations by the design team, including both the architects and the renowned skate park designer Sergi Arenas,. Despite the fact that the meeting convinced the critical audience, this event raised a major question about the boundaries of participation. The publicity campaign had focused on a small-scale context, the neighbourhood. In addition, as Juarez explains, the presence of advanced skateboarders in the co-design workshops would have made the process more complex, since the needs of other demographic user profiles (less experienced skateboarders, families, children) would potentially have been overridden. Juarez emphasises the importance of the participation of users with different sensibilities, including their sporting activity and leisure preferences, for technical decisions about skating ramps, bowls and obstacles. People's engagement during the process translated into a feeling of belonging and care for the space. In terms of use and attendance, the area shifted from a surplus space into an area with a high intensity of use by different kinds of users.

More information:

The report of the co-design process is available in Straddle3 website: www.straddle3.net/en/proyectos/skatepark-en-el-barrio-de-la-marina
Images: courtesy of Straddle3.

STAKEHOLDERS

Civic engagement	Students of the public school Torre Balldovina, users of the square: children and adults of the neighbourhood
Public administration	Municipality of Santa Coloma de Gramenet, Àrea Metropolitana de Barcelona (AMB)
Community architects	Equal Saree (Helena Cardona Tamayo, Julia Goula Mejón and Dafne Saldaña Blasco)

CONTEXT & AIMS

Plaça d'en Baró square, near the José Berruezo Silvente Garden, in the municipality of Santa Coloma de Gramenet, in the metropolitan area of Barcelona, is a co-created urban refurbishment that aimed to transform a space for new activities for children aged from six to twelve. The project highlights the importance of a transversal collaboration between the different areas of the City Council (Urbanism, Education and Equality) and the institutionalisation of citizen participation as a key tool of municipal public policies.

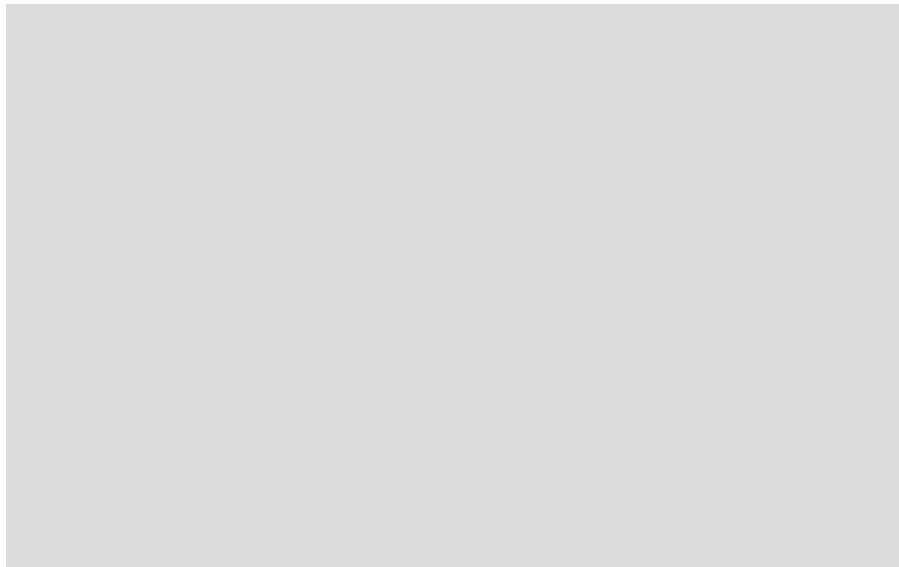
The process included the participation of girls and boys in the municipality of Santa Coloma de Gramenet, but it also included the perspective of other users, caregivers and the elderly. Workshops for collective reimagining of the uses that the space could host aimed to discuss design criteria to allow a diverse range of users to coexist in the space. Two workshops took place in the square (three hours each, 52 participants in total) and three more were developed at Escola Torre Balldovina, a state school in the neighbourhood (1.5 hours each). These workshops allowed the architects to analyse the existing uses of the square, discuss people's needs and desires, and imagine potential new uses. A plan of the ways the square could be used was developed in this first workshop phase.

The second set of co-design workshops took place with students at Escola Torre Balldovina, in the age group targeted as potential users in the project brief. Workshops with the school were framed by the initial sessions that had taken place in the square on site, and were directed towards the definition of a specific materiality and the design of specific elements. In the case of the school workshops, the methodology of a (co)Educating City recognizes children as active decision-making agents in everyday environments, where the design of public space is an element of paramount importance.

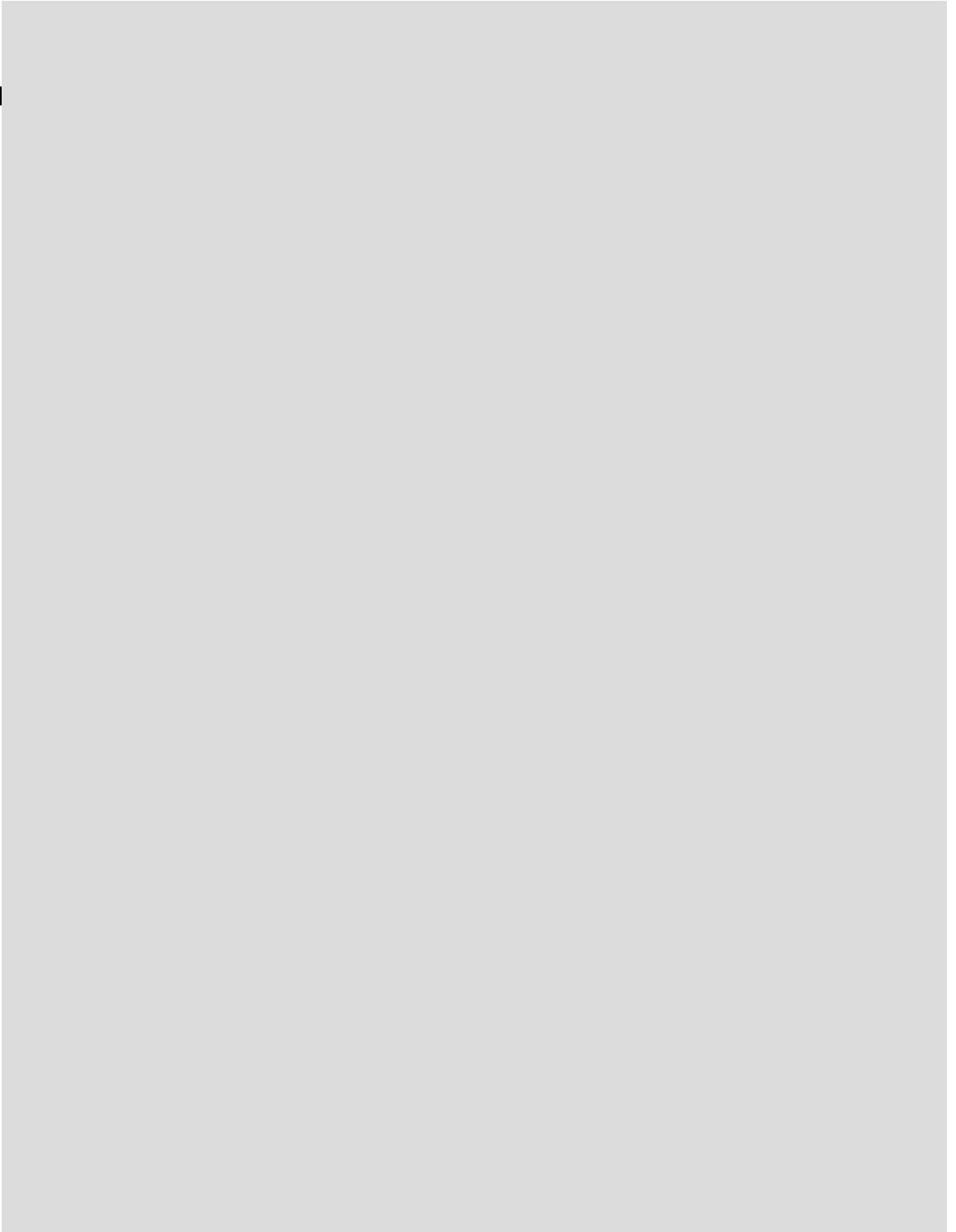
The project was executed during 2019.

— Information received from architects, translated and adapted by the author.

As built and workshop (below), pictures by Conchi Berenguer.



W21 BARÓ SQUARE



COLLABORATIVE TOOLS

Design commission as part of public agenda

The municipality invited the architects to develop the project of the square, as part of a municipal agenda of public space improvement with gender perspective.

S21
S42

Stakeholders > Direct invitation + Printed media

The invitation to Torre Balldovina school was done through the administration of the school. Posters were pinned in the neighbourhood.

G12
G21

Data gathering > Group walk + Diagnostic workshops

On-site neighbourhood workshops with children and families were done, for collective diagnosis of well-being, discomfort, and needs, and discussions of guidelines for the future uses of the square.

S23

Stakeholders > Make it fun

Participatory activities in the square were displayed as children games to encourage kids' participation. Snacks were offered in order to conclude with a social and leisure activity.

C24

Projective cartography > Users' needs (II): collective

Workshops allowed to identify and prioritise the needs of children as a collective (and their families), and their wishes for the transformation of the square, considering diversity.

D11

Design > Co-design workshops

Collective proposals for the transformation were developed with axonometries mixing drawings and collages.

Professional construction

Through public tendering competition.

P14

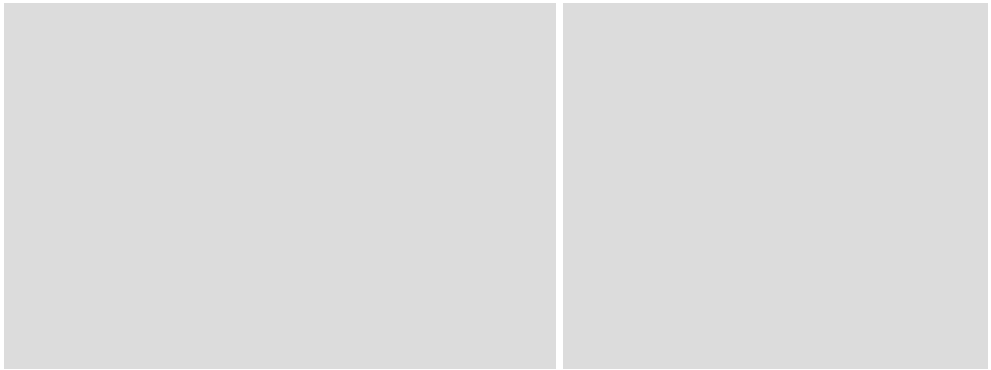
Post-occupancy > Evaluation indicators review

Evaluation indicators were defined a posteriori in order to evaluate the performance of the square a year after its transformation through ethnographic observation.

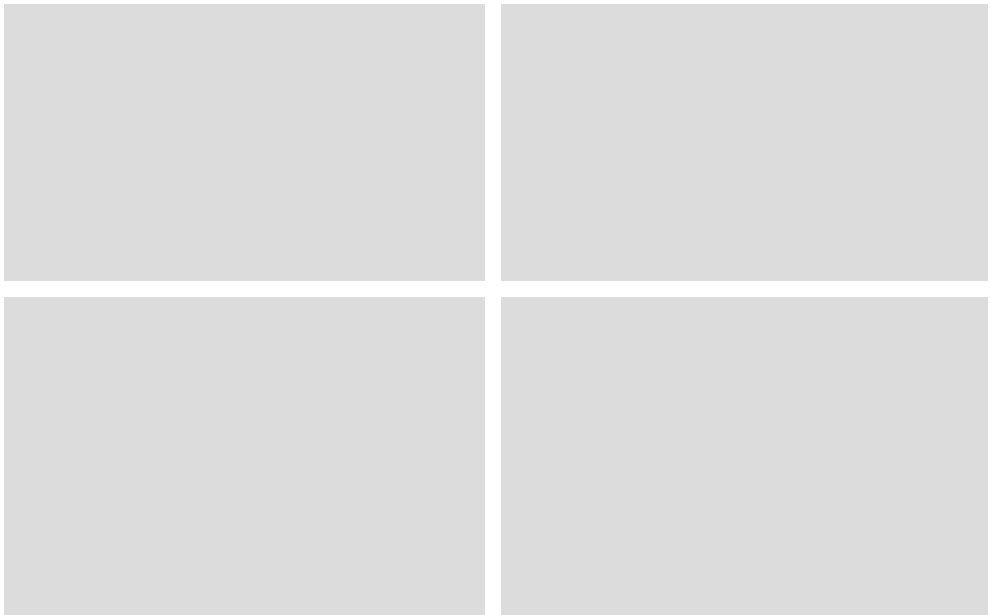


Axonometry.

W21 BARÓ SQUARE



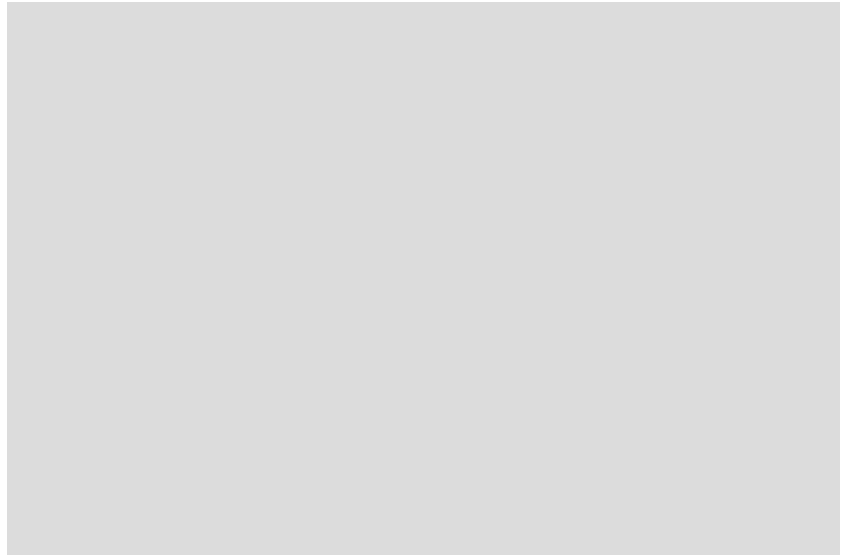
First phase of workshops in the square.



Co-design workshops with students of Torre Balldovina public primary school.

OUTCOMES

The transformation of Baró square was evidence of an efficient way of including users in decision-making in public space, in terms of both the methods used and the selection of participants, in relation to mixing on-site users with the profile of intended users at the local primary school. For the Equal Saree project an interesting balance was proposed between open and directed activity in Baró Square [W21], that aimed to respond to both users of the square, in the first set of workshops, and the social group targeted as specific users by the municipality's commission – children aged six to twelve – in a second phase developed in the nearby Torre Balldovina primary school, whose community agreed to participate. According to the architects, “the square has been conceived as an entirely playful space, encouraging free, inclusive and diverse activities and generating comfortable living spaces, with access to nature, that improve the daily life of the residents. The resulting design is a permeable and open square in the neighbourhood, with a variety of spaces and possibilities to meet the needs of different users, comfortable spaces and elements that respond to the collaborative design process of Baró square with the girls and boys in the neighbourhood” (from the account received from Equal Saree). An internal review process was developed by the architects. However, neither a review with users, nor the monitoring of the use of the space, was commissioned by the municipal administration as a procurement agency. This situation fails to offer a systematic evaluation of the space beyond the observation that it seems to perform excellently, and creates a need to include architects' post-occupancy evaluation of the space as part of the project commission, which would allow an improvement in future projects.



As built, picture by Conchi Berenguer.

[More information:](#)

www.equalsaree.org/es/project/fem-dissabte-a-la-placa-den-baro

Images: courtesy of Equal Saree.

PAS A PAS:

Ringo Rango Route is part of Pas a Pas project in Les Planes neighbourhood. See Stakeholders and Context & Aims in Pas a Pas sheet (W05).

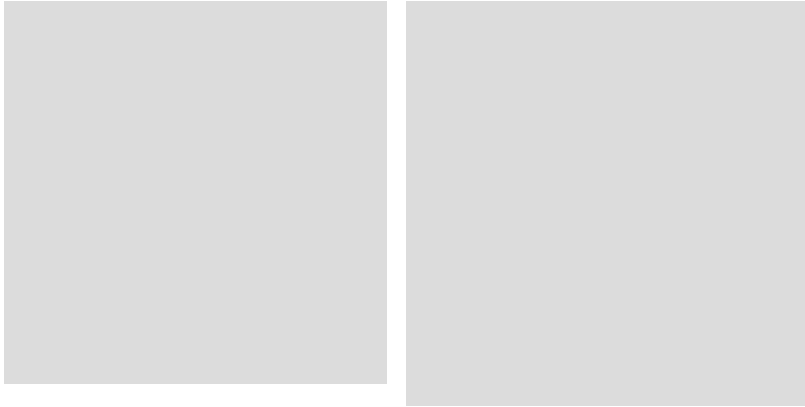
RINGO RANGO ROUTE

The Ringo Rango Route consisted of the design and construction of public steps connecting two levels in the hillside neighbourhood of les Planes, in Sant Cugat del Vallès, Metropolitan Barcelona, within the Pas a Pas project (W05). The route, in an area known locally as “Ringo Rango”, takes advantage of residual spaces between existing plots of land as shortcuts for pedestrians. The problem identified was that residents had to make long journeys on foot in a sprawling neighbourhood that had originally been designed for cars. The project was developed within the TAP-PUD Studio at ETSAV; twenty-five students organised the management, financing, logistics, design, construction and communication of the project. The execution of the project was undertaken by both students and the local community, using only donated surplus concrete samples, achieving an almost zero cost and a positive environmental impact resulting from the collaboration between the university, students, residents and construction companies.

OUTCOMES:

Ringo Rango effectively transformed a wasteland into a public space, solving an accessibility problem for pedestrians navigating their neighbourhood between two different levels. Despite the acknowledgement by the municipal administration that it is responsible for the improvement of public space, it was only through collaboration with local communities and schools of architecture that the transformation was enabled. Like the other projects of Pas a Pas, Ringo Rango became a pedagogical instrument for the ETSAV School of Architecture, enabling students to have direct contact with everyday neighbourhood problems.

Crucially, the declaration of the area as an academic campus by the municipality conferred on Ringo Rango the condition of a Temporary Autonomous Zone (TAZ), which allowed non-professionals to work safely by suspending construction work regulations and meant that the project was covered by the university’s insurance policy.



Site as found and with the intervention built. Source: A. Burgaya (2016) *Ringo Rango*. MSc thesis. Universitat Politècnica de Catalunya. Available at: www.upcccommons.upc.edu.



Organisation of ETSAV students and faculty in working teams for project development (left) and axonometry depicting a construction moment (right). Source: A. Burgaya MSc Thesis.

W22

PAS A PAS LES PLANES

RINGO RANGO ROUTE

W. WORKS | PUBLIC SPACE

Site visit.

COLLABORATIVE TOOLS

Academic + public administration collaboration

The success of the REC Community Energy Refurbishment project encouraged to continue with the collaboration.

G11
G12

Data gathering > Ethnographic observation + Group walk

An analysis of car and pedestrian mobility allowed to identify circulation problems.

M31

Process management > Co-organise / develop with

The project was developed within the Pas a Pas framework, which enabled the contact with local communities and the municipality.

S21

Stakeholders > Direct invitation

Activities for the community were organised to visibilise the transformation, as well as to engage local people, for example offering snacks for children and a concrete pieces painting workshop.

C16
C22

Projective cartography > Neighbourhood + Routines & habits

A cartography of the neighbourhood was developed as part of the larger project of Pas a Pas, which included urban structure, mobility habits, and landmarks.

D33

Design > Designing for low-risk construction

Given the self-construction character of the intervention, design addressed the need of low-risk construction methods.

D51

Design > Reclaiming empty plots

A wasteland between single-family housing structures was claimed as a public passage through collective action.

D41
D43

Design > Legislative blind spot + Declaring a Temporary Autonomous Zone

In order to guarantee the possibility of works by non-professionals, including insurance, the area was officially declared as "experimental campus", like university campuses.

E22

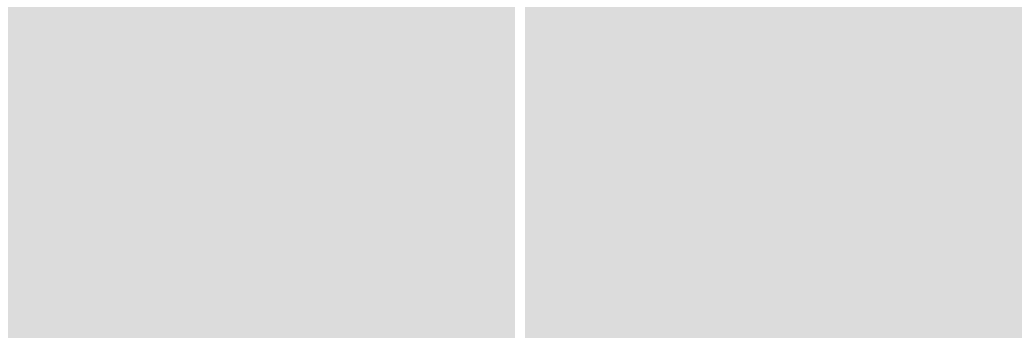
Execution > Recycling & reclaiming components

Construction was designed with donated concrete leftover materials.

E32
E35

Execution > User to execute + Collective assisted DIY-DIT

Construction was developed by architecture students and local community.



Construction process.

STAKEHOLDERS

Civic engagement	Neighbours of Safaretjos, Santa Coloma de Gramenet Associations: Casal Municipal de Safaretjos, Asociación de vecinos de Llefia, Comisión de cultura de Llefia, Agrupament Escolta i guia (CAU de Sant Adrià), Escola Rafael Alberti, Escola de música Benet Bails, Centre Molinet, Banda Sonora, Dansa 2001, Centre de producció cultural i juvenil Polidor.
Public administration	Municipality of Santa Coloma de Gramenet
Community architects	Arquitectos de Cabecera

CONTEXT & AIMS

The Safaretjos* projects include two years of collaboration between Arquitectos de Cabecera ETSAB studio (AC) and the municipal administration and local community associations. The project started as an academic initiative in 2016, with the aim of discovering how the neighbourhood could be improved through architectural projects and actions.

The diagnostic revealed Safaretjos' dual geographical context: on the one hand it is peripheral within Santa Coloma de Gramenet, but on the other it is very close to Barcelona – on the other side of the river to it. However, it is disconnected from its surroundings and lacks public facilities. As a result, it is becoming depopulated, particularly by young people, due to the lack of opportunities and activities.

Over more than two years AC developed several projects and strategies, including an on-site technical consultation office, and addressed issues such as borders, facilities, typological identity, elderly people's needs, the problem of isolation, and children's needs. The results were presented regularly in the form of "actions" which combined academic interests and leisure purposes, gathering together academic staff and students, residents, local associations and the municipal administration.

One of the key actions was the organisation of a community-building event and public debate on the situation of the area. Safaretjos was the only neighbourhood of Santa Coloma which did not have an annual community festival. These festivals are a deep-rooted tradition in Spain, and the absence of it is telling, as it evidences the lack of social cohesion and feeling of identity.

In addition to depopulation, a riverside masterplan had been approved and later halted after opposition from residents who, despite recognising that the area needed more housing to attract a new population, felt that it would have a negative impact as a result of its architectural morphology. As one of the key activities, the architects proposed an alternative to the official masterplan.

* "Lavatory" in Catalan.



Cartography of one of the events organised in Safaretjos during the academic year 2016-2017.

W23 SAFARETJOS

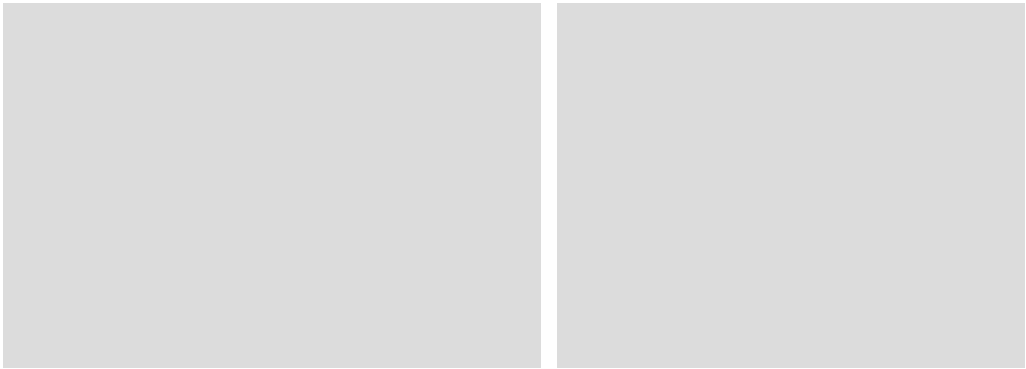
W. WORKS | PUBLIC SPACE

On-site technical support office. Left: group walk with Antoni Marzo, president of Safaretjos neighbourhood association. Centre: support office located in public civic centre of the neighbourhood in 2016. Right: in conversation with Francesc and Rosa, neighbours attended by the office.

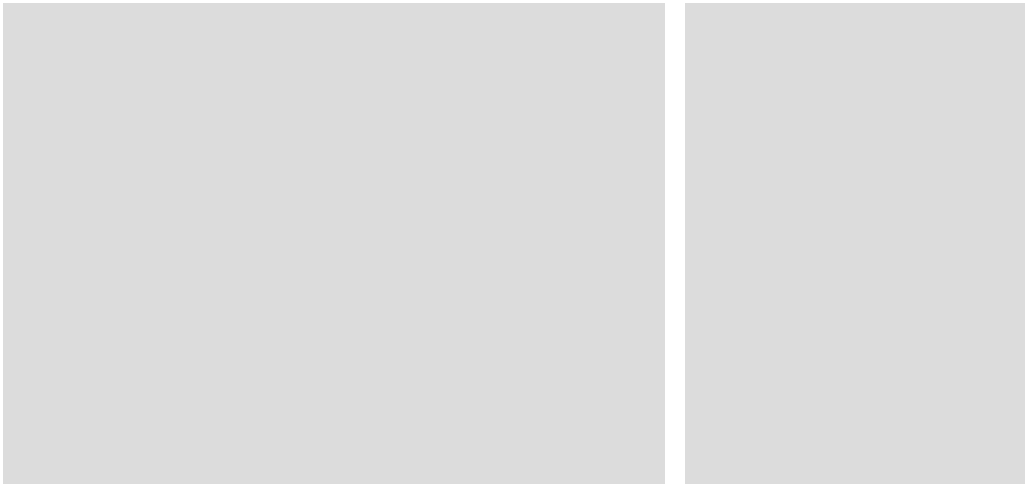
COLLABORATIVE TOOLS

	Academic brief The project was started by an academic initiative in 2016.
time ↓	G13 G22 Data gathering > On-site technical support office + Meetings with stakeholders A Citizen's Technical Consultation Office was placed in the local civic center in summer 2016, which allowed to work locally, get direct experience from the place, and encouraged informal meetings with neighbours.
	C16 Projective cartography > Neighbourhood A neighbourhood cartography was developed as a large-scale diagnostic document gathering different case studies. It is permanently exhibited in Besós riverfront park.
	C33 Projective cartography > Proximity or isolation An isochronal map was depicted to study the isolation of the area in relation to its surroundings and evidenced the lack of proximal public facilities.
	C35 Projective cartography > Memory An exploration of the decay of commercial space in the neighbourhood as a result of social and political abandonment was performed.
	C36 Projective cartography > The uncanny The cartography showed little-transited "empty areas", and thus was perceived as uncanny, lacking activity, and potentially problematic.
	E42 D33 Execution > Tactical on-site prototype + Design > Designing for low-risk construction Wastelands and abandoned neighbourhood spaces were claimed through tactical urban actions, organised partnering with local associations and neighbours. The construction of the event facilities was held by architects and neighbours using the superadobe construction method since it allowed the participation of people of all ages.
	E31 E35 Execution > Technical specifications + Collective assisted DIY-DIT Inspired in Recetas Urbanas' co-construction instructions sheets, a set of guidance documents were designed. Co-construction workshops were organised by technical staff.
	S42 S43 Stakeholders > Printed media + Digital platforms Invitations to the public event were delivered through mailing, posters and digital media.
	P13 Post-occupancy > Internal evaluation: tools & methods (I-IV) Evaluation of actions in relation to workshops, activities, conflicts, participants, fun and impact included an analysis of expectations-interest-reality. Construction workshops were evaluated in relation to what was expected, in terms of use, groups and activities. Resource management of material, time and investment was performed in each of the processes. It included funding sources, expenses, and hours spent by members.
	D12 Design > Proposing an alternative All previous cartographies were used to elaborate an alternative masterplan, since the official was recognised as necessary by neighbours but rejected due to its visual impact.
	P33 Post-occupancy > Process reports A process report is available at www.arquitectosdecabecera.org .

W23 SAFARETJOS



Co-construction workshops of the lavatory using the superadobe building method.



On-site debate between neighbours, academics and administration.

W. WORKS | PUBLIC SPACE



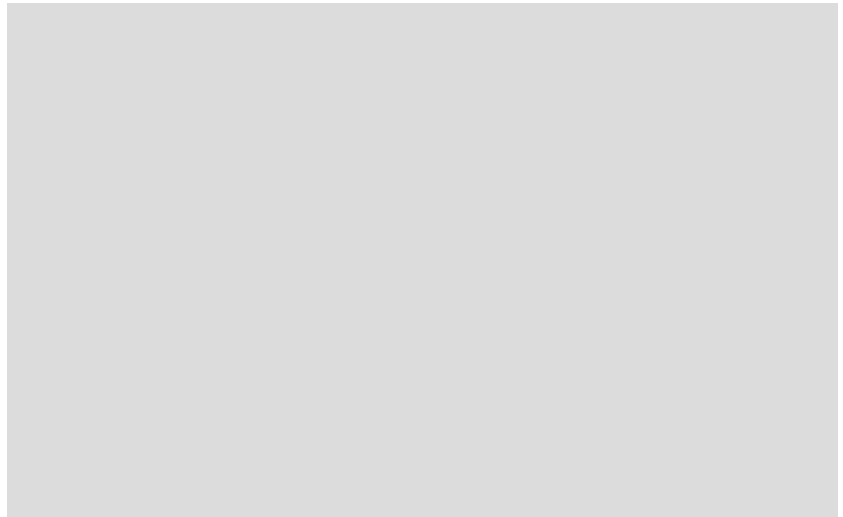
Action consisting in claiming an infrastructure's underneath wasteland as a space for public enjoyment.

OUTCOMES

The co-organised events became very successful in regard to community engagement and subsequent debates. Initially, the festival was a vehicle to bring the community together through the construction of the temporary facilities that would host it. Secondly, throughout the day, several debates about the neighbourhood and its problems and potential took place between residents, politicians and academics. Unfortunately, there was no transcription of the conclusions, nor of any kind of agreement between the parties involved.

In contrast, the project was not successful in the long run. First, the facilities of the event were not envisioned as reusable as in the case of children's playgrounds or similar leisure spaces. The lack of use and maintenance of the facilities meant that they deteriorated and created an appearance of being abandoned. Secondly, since the community events were initiated and coordinated by external parties, they were discontinued after 2018. Both situations reveal the need to actively involve local communities and the local municipal administration and ensure their long-term commitment to the project.

Finally, and most importantly, the alternative masterplan was not taken into consideration by the municipality, thus the project failed in its ambition to allow mediation between local communities and the municipal administration. The aim of generating a longer-term impact in terms of urban transformation or planning was not achieved, which can be attributed to the lack of convergence between different political agendas.



Alternative masterplan axonometry in preliminar studies.

[More information:](#)

www.arquitectosdecabecera.org/AC/en/portfolio/fem-festa-fem-safaretjos

Images: courtesy of Arquitectos de Cabecera.

ANNEXE 4: TOOLKIT AS PROJECTIVE AND PEDAGOGICAL TOOL

The value of the Toolkit to architectural practice, and to architectural pedagogy, was tested in the 5th year Taller Temàtic Arquitectes de Capçalera (TTAC, AC Thematic Studio), .specifically in the seminar course directed by Zaida Muxi that ran in parallel to the studio. The TTAC’s pedagogical approach is based on a direct relationship with specific neighbourhoods and local communities.

The following students participated in the research, in groups of 2 or 3: Mei Anglada Tort, Leire Ayala Garcia, Alex Benito González, Arnau Borrell Puig, Juan Busquets Sanromà, Marc Castellnou Velasco, Pol Cuartero Parreu, Anna-esther Diez Molinero, Marina Faner Bagur, Maria de l’Alegria Garrofé Pascual, Joan Graell Collell, Natàlia Ayelén Guaglianone Úbeda, Haneul Hong, Sara López Márquez, Pere Luna Mateu, Albert Massana Miralles, Pol Lluís Mateo Chedas, Alessandra Mencancini, Guillem Millán Ganaza,

Marina Paredes Sánchez, Alessandro Pecci, Maria Teresa Pennes Casla, Judit Pou Rosich, Patricia Sanchez Perez, Pol Soto Morgade, Marc Vidal Badia, Xiao Yiu, Guadalupe Zupanovich.

As described in Chapter 4, groups of students were given a physical copy of the Toolkit and asked to employ it to design the procurement process of their studio project. At the end of the term, students submitted a document that included a general project strategy and the discussion of tools employed during each project phase, their aims and the stakeholders involved. While describing their processes and design methods, students developed their own version of the Toolkit (image below). As an example, the full submission of students S.López Márquez, P.I. Mateo Chedas, P. Soto Grande can Be found in this Annexe.





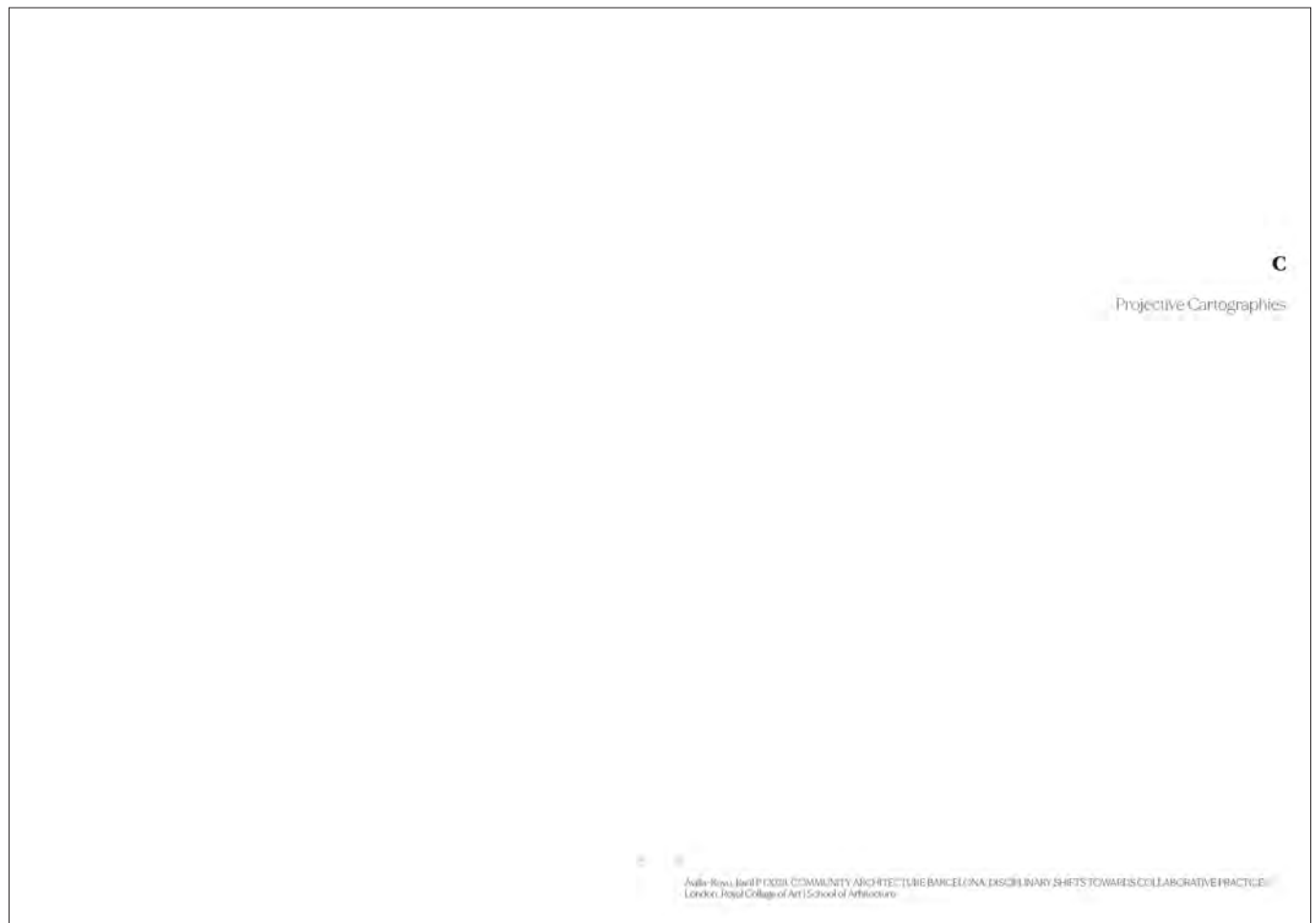
- T. Instrumental Methods
- C. Projective Cartographies
- D. Design
- E. Execution
- S. Stakeholders Involvement

	Instrumenta
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<p>DESCRIPTION Ethnographic methods aims to gather data from spatial performance through field observation: who uses the space and how, which are the social dynamics that take place and how are these influenced by specific spatial conditions. They are based on inductive reasoning, aiming to extract general rules from studying particularities, in an approach following from singular to global direction.</p> <p>DATA Qualitative, that can be translated into drawing cartographies, descriptions, videos, etc. and quantitative. Can be intrusive or non-intrusive when researchers do not directly interact with users.</p> <p>STRENGTHS Primary source about how users inform design decisions; space is assessed directly against use activity and performance.</p> <p>CAVEAT Since it works with case studies, it might not be representative. For that reason the selection is crucial: must be significant in situations spectrum and sufficient in numbers. Ethnographic data should be contrasted with other forms of inquiry such as interviews or surveys.</p> <p>SKILLS Critical observation.</p>	<p>...researcher assembling a group of people, meetings are not open to the public, architecture, however, who sits on the other side of the table and whose opinion is taken into consideration who is perceived by other stakeholders as a legitimate voice of the community.</p> <p>Qualitative: opinions, perceptions</p> <p>ST Very</p> <p>Less inclusive than a workshop, representatives may have the</p> <p>Enabling, ethical awareness, conscious listening</p>
<p>Analysis Workshops</p> <p>DESCRIPTION Intensive group activities aiming collective diagnosis or mapping, potentially transformed into needs program and use requirements. With a clear goal and structure, mediators or enablers ensure discussion moves forward and goals will be achieved on time and form through organising activities that encourage participation, some of which use architecture models or drawings.</p> <p>DATA Qualitative: opinions, perceptions, proposals, criteria.</p> <p>STRENGTHS Direct participation and involvement. Based on intensive conversation, operative and productive. They strengthen social dynamics, knowledge of neighbours, and perception of citizen's rights in engagement in direct decision-making.</p> <p>CAVEAT They can fall into false collective governance, asking for needs and criteria is not collective decision-making. To avoid that, this workshop should not be understood as a goal in itself in a checklist, but as part of a process in which diagnosis is followed by binding, co-design and projective workshops - not as one-way information flow, but as a conversation. They need to be inclusive and representative of population. Opinions need to be respected and listened to, avoiding negative leaderships or dominances.</p> <p>SKILLS Enabling, conflict handling, coordination and leadership, ethical awareness, conscious</p>	<p>T04 Group Walk</p> <p>DESCRIPTION Following Jane Jacobs' (1916-2006) community-led approach to urbanism, a group walk in the neighbourhood aims to open up discussions, exchange ideas in place and discover a certain area in the eyes of others. Allows a transferring knowledge and experiences between technicians and citizens, e.g. history of the place, decisions were taken, which are problems encountered, how is that space perceived? A complementary strategy to a group walk is a collective mapping workshop of an area, registering shared feelings and problems, for example, insecurity, traffic problems or lack of areas for certain activities. Group walks involve architects with local stakeholders, assuming that technicians are not the first ones to enter the city and that those already in place know better problems and opportunities.</p> <p>Qualitative and</p> <p>ST</p> <p>in-place discussion and testimony, the horizontal conversation between users and technicians, straightens social networks, all users' opinions are equally valued.</p> <p>is always partial and subjective, and yet this tool can provide unique information.</p> <p>Urban and historic knowledge, leadership</p>

<p>inscribed. Interviews can be conducted (based on predetermined questions), open (based on a conversation as it flows) or semi-conducted (with certain questions to be used as guidelines but allowing spontaneous conversation after them). Starting with general questions allows generating confidence for further personal questions if need be. Permission is needed and participants must be informed on how data will be used. A group interview allows personal but allows one to grasp a bigger picture and contrast opinions straightforward.</p> <p style="text-align: right;">DATA Qualitative data and subjective opinions with an inductive approach.</p> <p style="text-align: right;">STRENGTHS Direct and primary information, testimony collection.</p> <p style="text-align: right;">CAVEAT Importantly, questions must not condition the answer, thus first questions should be as open as possible. For example, AC starts the interviews with: "how is your house?", "How is your building?", "How is your neighbourhood?", tackling three urban scales with open questions to be further developed in a semi-conducted manner according to responses.</p> <p style="text-align: right;">SKILLS Generate confidence, dialogue conduction, conscious listening, synthesis capacity.</p>	<p>plan and transformation timeline for Badia del Vallès (Urbact) is organized in columns to allow establishing easy connections. 1- Guidelines: as emerged from a diagnostic participative methods and organized by themes. Lines in colour -codes emerge in the first column and allow to track guidelines throughout aims, interventions and objectives and intended results, also organized by topics and relating them with (blue letters). 3- Specific strategies and actions needed to achieve those objectives. The them is defined by its temporality, action type (legal framework, construction, etc), stakeholders involved (associations, institutions, universities, administrations), etc, analysed in the report. This column tackles strategic limits by analysing necessities (see Design Limits Map). Could be complemented with a list of priorities given in time.</p> <p style="text-align: right;">Relates strategies</p> <p style="text-align: right;">A straightforward connection between different phases, provides a big picture used as a plot</p> <p style="text-align: right;">Synthesising too much information in a single diagram might be limiting, can be complemented with detailed</p> <p style="text-align: right;">Strategic thinking, synthesis</p>
<p>Identify-Aim-Propose Manifesto</p> <p style="text-align: right;">DESCRIPTION A projective manifesto is a straightforward document that synthesises in few lines urban claims and projective strategies, identifying problems, opportunities and needs. It can be represented simply as a list, or as a diagram relating different concepts. In order to be of use and not simply a list of claims, needs to be proactive and projective. For example, AC manifesto is organized around three topics intertwined: 'we identify', which summarizes main problems or challenges diagnosed; 'we aim', identifying goals and objectives; and 'we propose', underpinning project strategies.</p> <p style="text-align: right;">DATA It does not collect data; is a communication instrument.</p> <p style="text-align: right;">STRENGTHS Direct claims easy to communicate, purposeful.</p> <p style="text-align: right;">CAVEAT Should be acknowledge as subjective and reductive.</p> <p style="text-align: right;">SKILLS Achieve consensus, prioritize needs, synthesis capacity.</p>	<p style="text-align: center;">TOOL</p> <p>Synthesis mind map</p> <p style="text-align: right;">DESCRIPTION Concepts maps mixing drawings and diagrams. The hybrid representation allows to connect diagnosis with strategies, stakeholders with urban situations, key with conditionings, existing and aimed. Mind maps's relational basis allow a clear understanding and become useful projective and strategical tools. have been analysed as teaching and thinking Mind Maps method. They allow a deeper understanding, clearer organization of data and more effective teaching through creation of existing knowledge structures by students (Novak,1990). They evidence how different aspects of student's (or technician's) design process are affected, their comprehension of a complex situation where different concepts and evidence their learnings (Sims - Knight et al, 2004). Applied to the discipline, mind maps incorporate a strong presence of architectural drawings and tool to bridge the gap between what both words and drawings fail to explain as separate.</p> <p style="text-align: right;">Relational drawings, conceptual</p> <p style="text-align: right;">Hierarchical, intentional</p> <p style="text-align: right;">As any other map is partial and biased; what is included is as relevant as what is excluded. Mind maps express the particular reading of a place of those v</p>

<p>noteworthy tool that crosses technical data with citizen perception. Named InPar (Tool for Social Audit of Urban Sustainability), this tool allows to evaluate of a number of parameters adaptable to each project (for example green spaces, public mobility, economic activity, and social cohesion) through both the technical dimension which responsibility resides in "experts" of different disciplines and that can be checked with objective data, and the perceptible dimension that relies on user's experience and the daily use of urban spaces. since each parameter is described and analysed both as existing and providing a reference optimal value, InPar allows to make decisions more transparent and to balance technical decisions with preferences, a conversation between decision-makers and users. It also allows establishing design priorities, while encouraging citizen engagement in the enabling decision-making process.</p> <p>Co-design Workshops</p> <p style="text-align: right;">DESCRIPTION Similar to analysis workshops, co-design ones are intensive instrumental group activities instrumentalised. Their focus may vary depending on the design phase, from guidelines and program definition, atmospheric and perceptive aims, or discussing architects' proposals around typology or materiality. They are crucial to agree on users' commitment to maintenance and building manipulation to improve performance, for example passive environmental systems. Led by enablers, architectural design tools (drawing, model, diagram, visualisation) become crucial for ideas exchange and discussion and to ground abstract discussions for more direct conversation.</p> <p style="text-align: right;">DATA Quantitative (sizes, sqm, materiality, etc) to qualitative (atmosphere, desired perception, etc).</p> <p style="text-align: right;">STRENGTHS Direct participation and involvement, strengthen social dynamics, knowledge of neighbours, and perception of citizen's rights in direct decision-making.</p> <p style="text-align: right;">CAVEAT They need to be inclusive and representative. Technical concepts should be explained in plain language.</p> <p style="text-align: right;">SKILLS Enabling, conflict handling, coordination and leadership, ethical awareness, conscious listening, synthesis capacity.</p>	
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C

Projective Cartographies

Avila-Rov, Iaril P. 0038. COMMUNITY ARCHITECTURE BARCELONA. DISCIPLINARY SHIFTS TOWARDS COLLABORATIVE PRACTICE. London: Royal College of Art | School of Architecture.

C01 Drawing the domestic

Domestic cartographies translate ethnographic methods of observation into a communicable drawing. Space is read thorough by subjective experience and modes of inhabitation: a portrait of the interrelationship between users, the physical space and the process of inhabitation. The space appropriation by users evidence home as the display of the inhabiting culture and identity, be this individual or collective. The limits of the cartography play a relevant role in defining the boundaries of the user's perception of the space in terms of use and appropriation.

Furniture and objects become marks of domestic protocols, enablers of activities and imprints of daily routines and habits. They are crucial in the unstable and transient condition of the domestic space, becoming catalysers of activities capable of constantly redefining the space, and thus articulating social activities. Understanding houses not as an empty between content-content-dwellers space but as a relational ecosystem becomes a crucial design approach considering forms of inhabitation.

C02 Picturing the domestic

Complementarity to domestic drawings and also emerging from ethnographic research methods, photographs and video capture domestic inhabitation. Visual media reveals the relationship between morphological space, its qualities of use and appropriation filtered by users form of living, culture and identity. This allows a straightforward portrait of a frozen moment and an easy comparison between different spaces or moments. For example, it can be used to study spatial appropriation at different moments of the day, which members of the household use the space for which purpose, what is the nature of activities developed (individual/relational/leisure, work, reproductive). It can also be used to study how dwelling with the same layout, belonging to the same building, are inhabited differently, resulting in very different architectures.

C03 Building as Socio-Spatial Ecosystem

While the property mindset understands buildings as an aggregation of individually owned and autonomously managed apartments, the reality of buildings is that they operate much more as socio-spatial ecosystems. Not only because there are several shared spaces to a greater or lesser extend, but also because the contact between apartments that share constructive elements forces a constant negotiation between dwellers on how to live collectively, enforced by the social interrelationships that derive from living together and that transcend property boundaries. In other words, buildings create an unavoidable interdependency between inhabitants. This is explicitly encouraged as design strategy in cooperative housing buildings for mutual benefit.

Understanding the building as an ecosystem requires analysing in parallel its physical infrastructure and the social fabric that inhabits it, studying both spheres not independently but in their overlapping in multiple spatial forms: individual cells, collective areas, and the street that supports the building. Inquiry methods can include ethnography and interviews.

In literature, the relevance of those spaces for the building as a whole was beautifully depicted in George Perec's beautifully depicts a fictional life, a User's Manual (1978) cartography of a building located in 11 Simon-Cribbeller str, district 17.

C04 Neighbourhood

Since neighbourhoods are by definition open and constantly changing a neighbourhood cartography will necessarily be limited and reductive. And yet it can enable an incisive reading and discussion around certain aspects. Working inductively, it can reveal casuistics, both physical and social, and relate them with other relevant case studies or with other studied dimensions. The neighbourhood cartography unveils its relational dimension, enabling connecting case studies for analysis (similar or interrelated) and projects (needs and opportunities).

The selection of cases to portrait is crucial when working with inductive methods, where individual examples explain recurring situations.

<p>C05</p>	<p>Façade as mediator</p> <p>The ambiguous nature of the façade – between inside and outside, home and street, individual window and collective identity – and its condition as a constructed mediator in terms of privacy, domestic versus urban scales, and environmental conditions makes it a paramount element in cities, both in terms of identity and use. Either when addressing the façade from the domestic side of the urban one as entry points, it needs to be inquired from both as a whole, understanding the interdependency between the street and the house. In other words, homes qualify the street in the same way that streets qualify dwellings. The façade can be studied from multiple entry points, all of them interrelated: constructive dimension and environmental performance, enclosed (inside or outside) space, thresholds and thresholds it holds, relationships that enable, openings and elements it contains, etc.</p> <p>The domestic is often revealed in the inhabited façade that responds to users' needs with a visual impact. In these cases, the user's objects are not something placed on top of architecture, but an intrinsic part of the architecture itself.</p>	<p>C07</p> <p>Urban Landmark</p> <p>Landmarks are recognisable iconic places or urban elements that serve as reference points due to their uniqueness. Monumentality and presence of history might be relevant features, but not necessary, necessary. They are urban events in their own right capable of catalysing activities around them. The taxonomy of these spots reveals how they are perceived and used in a different way than more common urban elements, both in terms of behaviour and social relations that take place.</p>
<p>C06</p>	<p>Urban Void</p> <p>A street or a square are not empty spaces between buildings, but a "charged void" as defined by the Smithsons due to its capacity of appropriation by users and relational nature. Urban spaces are always – context-dependent both morphologically on adjacent spaces and streets infrastructure and socially embedded in neighbourhoods dynamics, identity and culture.</p> <p>The relational and consecutive reading of the space plays a fundamental role in space perception, and thus behaviour. For example, Barcelona's Cathedral and Santa Maria del Mar church have similar sizes, comparable to squares. However, they are perceived fundamentally different since one enters Santa Maria through narrow streets, much smaller than the indoor space, and the cathedral's front plaza is way larger than its indoor space. As a result, from a perceptive perspective, the church's effect is much impressive than the cathedral's one despite its monumentality.</p> <p>In addition to study spaces in relation to their context, when studying urban voids some other dimensions play a fundamental role, such as use (for example how commercial spaces activate the street), ground floor porosity, urban furniture as enablers, and other vectors that impact user's behaviour and perception.</p>	<p>C08</p> <p>Recurring urban element</p> <p>Some recurring urban elements can provide a unitary character to an area. Despite any of the elements might be iconic and coherent enough to stand out from others, the whole might be singular enough to be recognised as distinctive and provide the neighbourhood a spatial identity.</p> <p>Rather than planned, quite often recurring urban elements are a result of existing frameworks during a period of time, such as legislative, administrative, ownership schemes or topographic constraints.</p>

<p>C10</p>	<p>Interactions (I) Social Activities</p> <p>The study of urban space cannot be detached from the social relations it enables, encourages or prevents. Behaviour needs to be analysed in relation to context and specificities of social profile, addressing issues about inclusivity and accessibility, questioning who is not using that space and why, who finds difficulties in its use or feels uncomfortable in it.</p> <p>Social interactions in urban space were studied by William H. Whyte in 1970s, who used direct observation and recording to analyse urban behaviour on a scientific and systematic basis. After him, Jan Gehl famously developed a specific method to study public space and introduced relevant concepts and observations. For example, the definition of three categories of activities that people perform in public spaces: necessary, optional and social (2006 [1980], pp. 11-14). While necessary ones happen regardless of urban conditions; optional ones are linked to the quality of public space, and social activities cannot be forced, require the presence of others and generate a feeling of belonging, identity and care. On a smaller scale, the studies of Herman Herzberger (2016 [1991]) are remarkable concerning which spatial elements and their specific qualities –allow unexpected opportunities for socialization or appropriation.</p>	<p>C16</p> <p>Subjects' movements</p> <p>Citizens movements and displacements are both conditioned by and have an impact on public space. That condition is often overlooked in front of road traffic. Quite obviously, for example, in a square full of restaurant terraces the constant movement of waiters becomes as physical as the presence of urban furniture, despite being chaotic and immaterial.</p> <p>User's movements must not be approached from a universal condition but a subjective approach. While architecture has often been presented as for the universal user (male, white, middle class, and healthy), from Le Corbusier's Modulor to design manuals of any kind, a quick observation of the use of public space rejects that hypothesis.</p> <p>The comparison of the three – age groups' city displacements children, sportive youth, and elderly – show how subjective perception of the city is also bonded to the subject's mobility possibilities. It could have also included, among many others, wheelchairs, baby carriages or heavy parcels delivery. Thus, once more, it is relevant to ask to whom does the design responds, or who is not taken into considerations that take place.</p>
<p>C12</p>	<p>Subject's Portrait</p> <p>Subjects cannot be studied as detached from its form of inhabitation: space-object-subject-identity-activity-social form are interdependent and interlocking dimensions against which design should be measured.</p> <p>"The interior is not just the universe but also the étui of the private individual. To live means to leave traces", (Benjamin, Illumin clones II, 1972, p.183). By matching the architecture of the interior with an étui (case), Benjamin equals the tailoring of the case to the object that contains with the capacity of the individual to customise architecture interiors. These revealing traces take the form of imprints and filth in surfaces, but also furniture and objects which become marks of domestic protocols, enablers of activities and imprints of daily routines and habits. Furniture and smaller objects become projections of dwellers' subjectivity in the space, who may have not only a pragmatic relation to them but also an emotional attachment or symbolic meaning. Objects are also an evidence of status, aesthetic preferences, and personality.</p> <p>The analysis of the subjects starts in its immediate surrounding, the personal space, and can extend towards public space, which is an extension and a necessary complement of the domestic.</p> <p>Aware of that condition, Georges Perec beautifully described the characters of Life, a User's Manual through never-ending lists of the objects they possessed.</p>	<p>C17</p> <p>Users' mobility habits</p> <p>Mobility habits allow an analysis of the neighbourhood from users' routines. In leaving the house, domestic inhabitation is extended in the street. The street understood from the movement is a distinctive approach than the street as a self-contained space: it is related to and dependent on an infrastructural mobility network and individual tasks. City displacements are influenced by the multiple goals they may have, from fulfilling compulsory activities or work, leisure or social activities, or the direct pleasure of walking or cycling. Mobility habits are multi-scalar, from neighbourhood, city or even territorial dimensions.</p> <p>With an inductive method, cartography of mobility habits allows to read the city as a place in motion from personal experience and identify the perceptive causes that affect mobility behaviour: why do users choose some streets over others, why some paths seem more appetizing, which areas are perceived as dangerous or boring, etc. This is closely linked to other user's habits and city dynamics, particularly affected in zoned districts residential areas empty during the day, office and productive districts at night.</p>

Avila-Roux, David P. (2021). COMMUNITY ARCHITECTURE BARCELONA: DISCIPLINARY SHIFTS TOWARDS COLLABORATIVE PRACTICE. London: Royal College of Art (School of Architecture).

D01 Adaptable ground

Adaptable grounds aims a higher degree of flexibility and changes over time through neutral and generous spaces and a strategic disposition of fix infrastructural elements such as cores,

Applying the typical spatial and construction logic of office buildings where partitions can change easily. John N. Habraken designed "supports and infill" housing system based on the overlapping of two construction logics: supporting infrastructure (structure and installations) and a soft infill that could be customized (walls, furniture). That strategy aimed changes and adaptations developed by users given certain systemic rules defined by the architect. It was further applied by architects such as Frei Otto (Okol-Haus, Berlin, 1983-88) or Yositaka Uchida (Next 21 Osaka, 1984).

Emerging from the logic of office spaces, adaptable ground design can be applied to any building types, such as facilities or public space, where many different activities can happen in different moments. In both cases, the space is designed as neutral and enabling, rather than a rigid layout bespoke to specific limiting dimensions. Importantly does not mean "empty" but equipped with the necessary elements.

D02 Systemic variations

While "adaptable grounds" is based on a constructive approach to support and infill structures, systemic variations rely on a typological strategy through a strategic disposition of spaces during design phase. Those typological are relatively limited in terms of potential further changes, but very efficient in terms of resources investment.

This strategy can be applied in two different moments. First, in design phase, when having to address different situations and program requirements. This strategy was applied to respond to many different user's requirements in different housing units (Siza, Malagueira: 1973- 77). Secondly, in post-occupancy phases, when the building might be dismantled and re-assembled differently (e/clo prototype, Etsav), or when a limited number of modifications to the building can be foreseen (Lacol, La Borda). The example of la Borda is exemplary of both defining different flat responding to different household sizes (not pre-defined compositions) and allowing interchangeability of rooms between flats (yellow) over building occupancy.

D04 Enable user to manipulate

Citizens movements and displacements are both conditioned by and have an impact on public space. That condition is often overlooked in front of road traffic. Quite obviously, for example, in a square full of restaurant terraces the constant movement of waiters becomes as physical as the presence of urban furniture, despite being chaotic and immaterial.

User's movements must not be approached from a universal condition but a subjective approach. While architecture has often been presented as for the universal user (male, white, middle-class, and healthy), from Le Corbusier's Modulor to design manuals of any kind, a quick observation of the use of public space rejects that hypothesis.

The comparison of the three - age groups' city displacements (children, sportive youth, and elderly) - show how subjective perception of the city is also bonded to the subject's mobility possibilities. It could have also included, among many others, wheelchairs, baby carriages or heavy parcels delivery. Thus, once more, it is relevant to ask to whom does the design responds, or who is not taken into consideration (ones that take place).

D05 Users' mobility habits

Quite often regulations defined ignorant users, that is, considering that dwellers are unable to understand building performance and how to manipulate it. On the contrary, users have proved capable of pro-activity and totally capable of improving building performance. Users' manipulation of the building can take different intensities, the most basic of which is collective space appropriation, which was encouraged by Team X members especially after the 1960s. On a first level, furniture and objects in common areas in the building such as access corridors, that is outside of private spaces, evidence the trust and confidence between neighbours.

On a second level, large-scale elements manipulated individually, such as "inhabited facades" proposed by Gio Ponti (Casa in via Dezza, 1957), Yves Lion (Domus Demain, 1984), or Herman Hertzberger (Drie Hoven Retirement Home, 1971). User's appropriation of the facade challenges the architect's fully control the image and identity of the building. Finally, the collective handling of building-scale devices, like greenhouses or environmental systems, entails a collective understanding of the building as single social and spatial whole, from which a feeling of community and responsibility derives and that can produce a pedagogical effect on dwellers by means of knowledge and awareness.

D12

Reclaim empty plots

Sometimes the "meanwhile condition" in urban tempos might entail or even decades. If land and territory are understood years as common with private management, unused empty plots are unacceptable goods given the limitations of land and the need for open-air areas in compact cities, this affects all kinds of property, it is particularly obvious. While in publicly owned land and properties, which are often reclaimed by local communities to develop self-managed projects. In Barcelona the municipality developed Pla de Buits (Empty Plots Plan, 2012 & 2015), which sought to temporary activate empty and unused plots of public property with community-led projects that would develop activities of public interest; and the Citizen Assets program (2017) to consolidate and foster communitarian self-management.

D13

Fill in the gap

Similarly to the reclaim of empty plots, fill in the gap strategy aims to exhaust available building volumes and reclaim existing underdeveloped urban structures. Named "urban density by ATRJ (ear (at)ri.city)", this strategy understands the city as a common good beyond property frameworks and allows claiming unused gaps as areas of collective interest. The construction on top of an existing building or between them entails addressing larger problems of property and management, often having to incorporate juridical and legislative teams.

While many of these projects have been proposed as regenerative strategies, not so many have been executed due to legal difficulties and ownership schemes.

E

Execution

<p>E05 Undo</p> <p>To improve existing conditions it might be necessary to go back to a past situation by undoing, dismantle, or deconstructing. This is particularly relevant in places like Spain, when during decades economic growth was based on an insufficiently controlled construction industry and urban developments, sometimes accompanied by cases of political corruption.</p> <p>The complicity of architects in doubtfully ethical projects sometimes directly illegal produced uncountable cases of natural environments destruction and mass territorial consumption. While traditionally architects aimed for large construction projects some voices claiming for a de-urbanisation as a step forward. Since dismantling entails management of resources, both material and personal, it may be seen as an opportunity to have an impact in the local economy and social fabric of the area, as the project of NUndo for Cabo de Gata-hotel.</p>	<p>E11 Parasite</p> <p>Emerging from biology, an architectural parasite is an extension construction depending on a host structure. Parasite architecture was developed as an architectural strategy in the 1960s and 70s, with paradigmatic projects like the Plug-in City by Archigram (1964). The parasite might establish different programmatic relationships with the host, being 'the good parasite' the one that not only exploits the host's services and resources but one that improves spatial conditions by complementing them. A parasite can entail different degrees of performance, from long-term, temporary or punctual protest actions. While parasite has been a common strategy for activism, recent famous projects like Lacaton & Vassal apartments propose a more permanent reading of this tactic.</p>
<p>E09 Recycle and Reclaim Components</p> <p>Waste is in the claim eye of the beholder. Recycling and reclaiming become a against the vast amount of materials wasted in the construction industry that prioritizes time and budget to and residues have resources harnessing. Trash an almost zero cost and avoid creating more-waste. Building with them implies understanding their properties and construction logic, rethinking its formalisation and questioning standard aesthetics.</p> <p>Some offices like Superuse, Basurama or Makea, among many others, have become specialists in recycling trash materials and working with residues. The use of internet platforms such as armtools, rotordc.com, el-recetario.net (promoted by Makea), or re-use.eu offer recipes to reuse and recycle materials in an open-based knowledge.</p>	<p>E14 Users to execute: assemble, instructions</p> <p>For the user to execute designer needs to prepare a set of drawings with instructions, using plain and easy non-expert language, to be followed using basic tools. It is based on making knowledge open and available, allowing the user to interpret design up to a certain extent according to needs, expertise or preferences.</p> <p>The outcome is defined by the designer with different degrees of openness by users, from aesthetic (for example plastic colours in the Instant City), open to interpretation (Alexander's Mexico) or straightforward ensemble (Enzo Mari).</p>

S

Stakeholders Involvement

3 3

Avila-Rosa, Iacopucci, COMMUNITY ARCHITECTURE BARCELONA, DISCIPLINARY SHIFTS TOWARDS COLLABRATIVE PRACTICE
 London: Royal College of Art | School of Architecture

<p>S01</p>	<p>Direct Invitation</p> <p>An invitation seeking someone's participation or attendance in a particular event must show the necessary information about the event (place, time, contact), but equally important be attractive and engage visually. In other words, explain to why the event is relevant to the audience and why attendance is in their own benefit. While some readers might be familiar with the context, for example in the case of long-term neighbourhood struggles, for some other people this is an opportunity to join. Thus, invitations should respond to different audiences accordingly.</p> <p>Invitations can be shown in different media, from street posters to mail invitations, and also virtually, from social media to emails. Each of these media is more likely to be read by a certain profile of people, so it is important to diversify invitations to reach a broader spectrum of participants.</p>	<p>S06</p>	<p>Artefact invades public space</p> <p>An architecture movable device is a useful tool to reach passengers in the street. Beyond its specific use, an artefact always calls people's attention and fosters curiosity, thus producing an approaching effect on people.</p> <p>Artefacts can be used for many different purposes, from dynamization campaigns, informing or gathering data, tactical urbanism or political claims.</p> <p>Artefacts can become movable discovery elements, or temporary landmarks in specific areas, for example becoming an on-site technical support office (discussed in chapter Instrumental Methods).</p>
<p>S03</p>	<p>Make it fun</p> <p>Quite often the potential of leisure activities is an underestimated strategy in architecture. As Johan Huizinga described (<i>Homo Ludens</i>, 1938), ludic activities are a key element in culture and society. Having fun is not restricted to children, nor opposed to politically charged events or transformative actions but on the contrary, a catalyser for them to take place. If an event is both political and enjoyable attendants may join for different reasons. People are likely to find interesting activities that escape from routine, where unexpected activities take place or that involve doing something different or new, such as construction workshops.</p>	<p>S07</p>	<p>Spatial Alteration</p> <p>Likewise urban artefacts, spatial alteration work through fostering curiosity and calling people's attention. By its scale, it encourages discovery and allows participants to engage in a spatial experience that can be closely linked to tactical urbanism. It can be used as a playful discovery experience, to engage people with other related activities, or to call attention to some unnoticed urban condition, stressing social or political claims.</p> <p>Spatial alteration produces an effect on passengers, who shift their mental and emotional approach when approaching the unexpected. Curiosity leads to playfulness, which has an impact in behaviour and performance.</p>

<p>S08</p>	<p>Confront</p> <p>"Our bodies, as thinking and desiring bodies, are embedded in network of interdependencies at multiple scales (1) In the crisis of words in which we find ourselves, deafened by the incessant noise of communication, putting the body becomes the essential condition, the first one, to start thinking. We all don't need to start burning. Or yes..." Marina Garcés, "Poner el Cuerpo" (Placing the Body), 2013</p> <p>Garcés' reference to Mohamed Bouazizi's self-immolation on 17 December 2010, the catalyst of the Tunisian revolution and Arab Spring in 2011, cannot be more explicit. As opposed to theoretical revolutionary discourses inherited from the past, Garcés claims for a direct daily involvement to change what we consider unfair situations in a world framed by everyone's interdependencies. We must confront reality by "placing the body".</p> <p>In this vein, the tactic of confrontation aims to seek a certain degree of conflict, discomfort or polemic to place the spectators' body in an uncomfortable position. Confrontations target cultural, social and political constructs, work from abstraction to talk about real situations, and point out society's interdependencies to translate someone else's problems and conflicts into one's experience.</p>	<p>S10</p>	<p>Printed Media</p> <p>Broadcasting through printed media beyond books (see section of "Knowledge Transferability" in Instrumental Sections chapters), includes postcards, pamphlets, flyers, posters and other paper-based formats. They are easy to distribute in events or pin up in local stores. Printed media can become a 'souvenir' for those attending and a material to be consulted in the future.</p>
<p>S09</p>	<p>Collaboration with external events</p> <p>Extraordinary events of any kind, from festivals to workshops or exhibitions can produce a beneficial symbiotic relationship between organisers and specific activities in terms of raising awareness, make claims explicit, or networking.</p> <p>Some events can even mitigate regulatory restrictions or can even suspend them. A clear example is art and architecture festivals, or academic events in public space, where many times the space is occupied or temporary transformed. These areas operate likewise what Hakim Bey described as Temporary Autonomous Zones® (TAZ, 1991): the strategy to generate autonomous areas at the margin of the state's socio-political control as being able to develop autonomously their own agenda. That tactic was further developed by Madrid's architects collective Todo por la Praxis (see archivetaz.org).</p> <p>In some events a certain degree of TAZ can camouflage politically charged activities as harmless at the eyes of the administration, reluctant otherwise, that overlooks its real potential under the costume of another activity. Activist architect Santiago Cirujeda famously benefits from these events as alibis were to carry out architecture experiments and where to explain his legal - or illegal - "Urban Recipes".</p>	<p>S13</p>	<p>Public Exhibition</p> <p>Exhibitions in public space approach the work of architects to neighbours and make visible their actions in the neighbourhood. They become meeting space to discuss proposals, and receive informal - but often non-organised - feedback from work. They can take place in the form of a day event or as permanent ones.</p>

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ae01

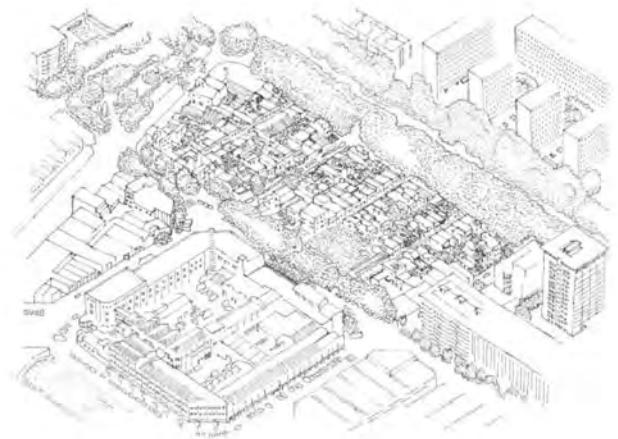
Casetes del Poble Nou, un del barri antic de Barcelona situat al final de l'Eix Pere IV.

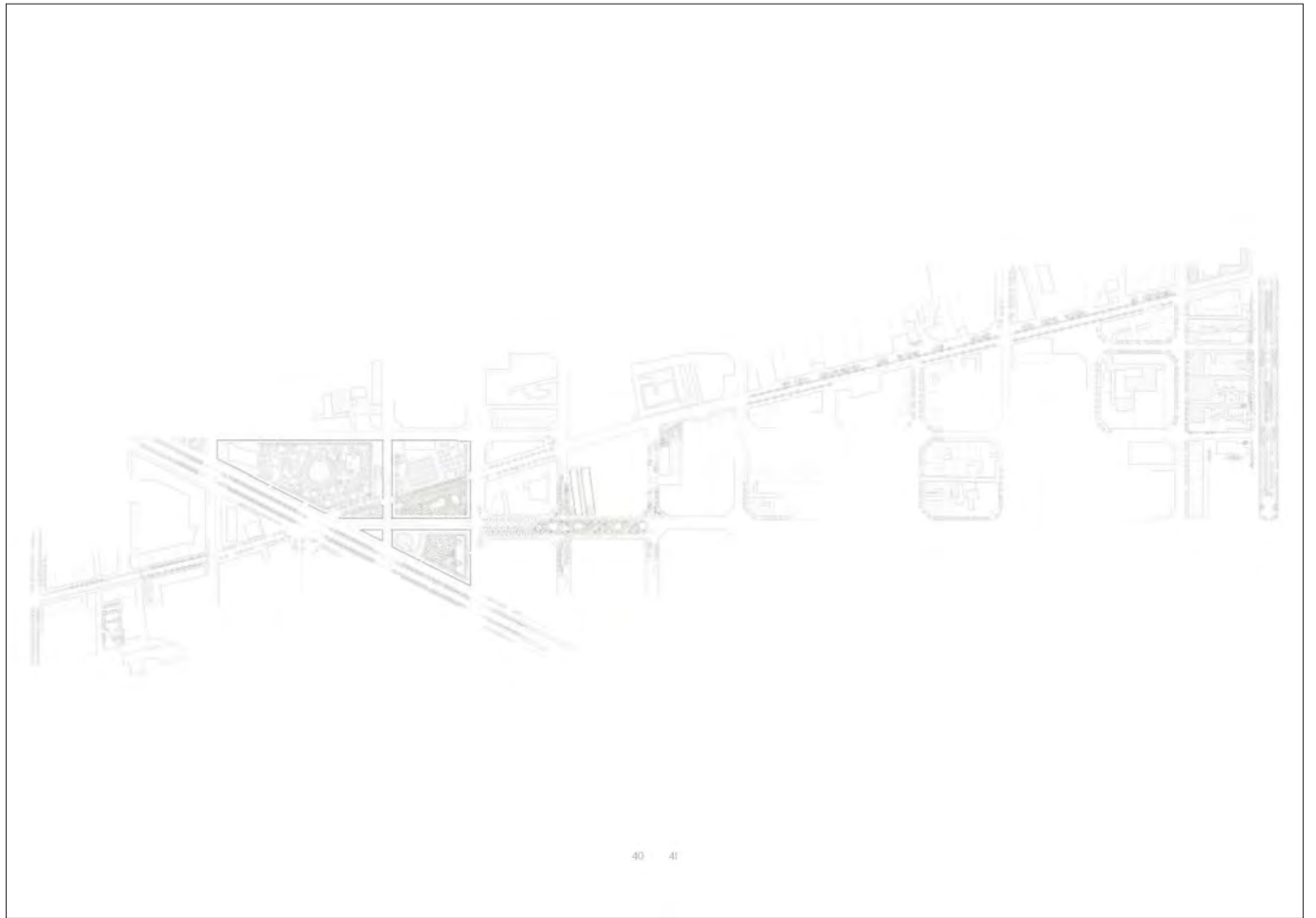
La preexistència és molt significativa, unes tipologies de cases patri on el contacte amb la terra i la vegetació és el punt més rellevant i significatiu de la forma d'habitar-les.

La situació de les casetes no és del tot favorable a causa dels límits que té establerts. Rambla Prim es troba a una cota superior als passatges el que produeix una desconexió. D'altra banda, carrer Maresme convertit en una via destinada a la circulació i estacionament de vehicles, a l'altra cara d'aquest es troba el recinte de ca Lilla un recinte industrial privatitzat que no genera cap porositat o activitat en planta baixa que generi relacions amb el barri.



ae02





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ae03

Els Souvenirs són aquells objectes capaços de transmetre les primeres impressions sobre el barri. Aquesta sèrie de tres bodegons volen expressar a través de simbolismes i mitjançant elements trobats al lloc o que poden remetre a ell, tres idees fonamentals.

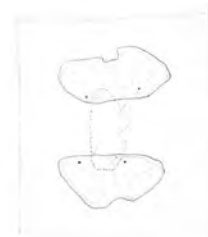
La casa, un lloc domèstic. Ple de materials tous, tèxtils i càlids. Les façanes han sigut conquerides per la vegetació, la natura s'ha obert pas i ha portat bellesa i humitats.

El carrer, ple de vida, cadires i arbres. En un estil de vida tan proper a terra el carrer es converteix en l'extensió de la casa. És habitual veure als veïns reunits a fora en taules i cadires que habiten els passatges.

La indústria té una presència notòria en la imatge del barri. És la identitat que caracteritza aquesta zona, l'òs varia, la imatge perdura. Reperisar aquests recintes permetrà millorar el barri.



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ae06



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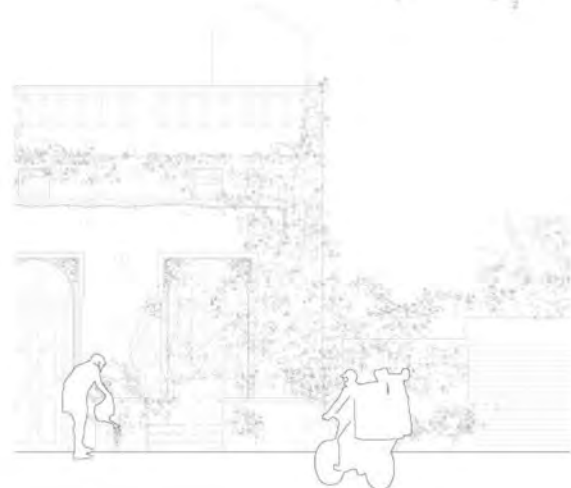
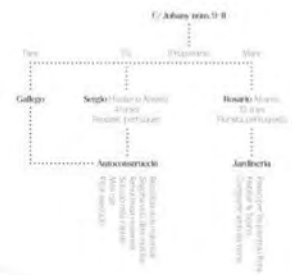
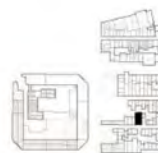
Establir contacte amb usuaris permet tenir una visió real i immediata del lloc, casos reals amb problemes subjectius.

El primer cas es troba a Jubany, un passatge reurbanitzat, amb un aspecte idíl·lic a l'exterior, que amaga un món d'autoconstrucció i precarietat. Aquests usuaris compten amb una parcel·la doble.

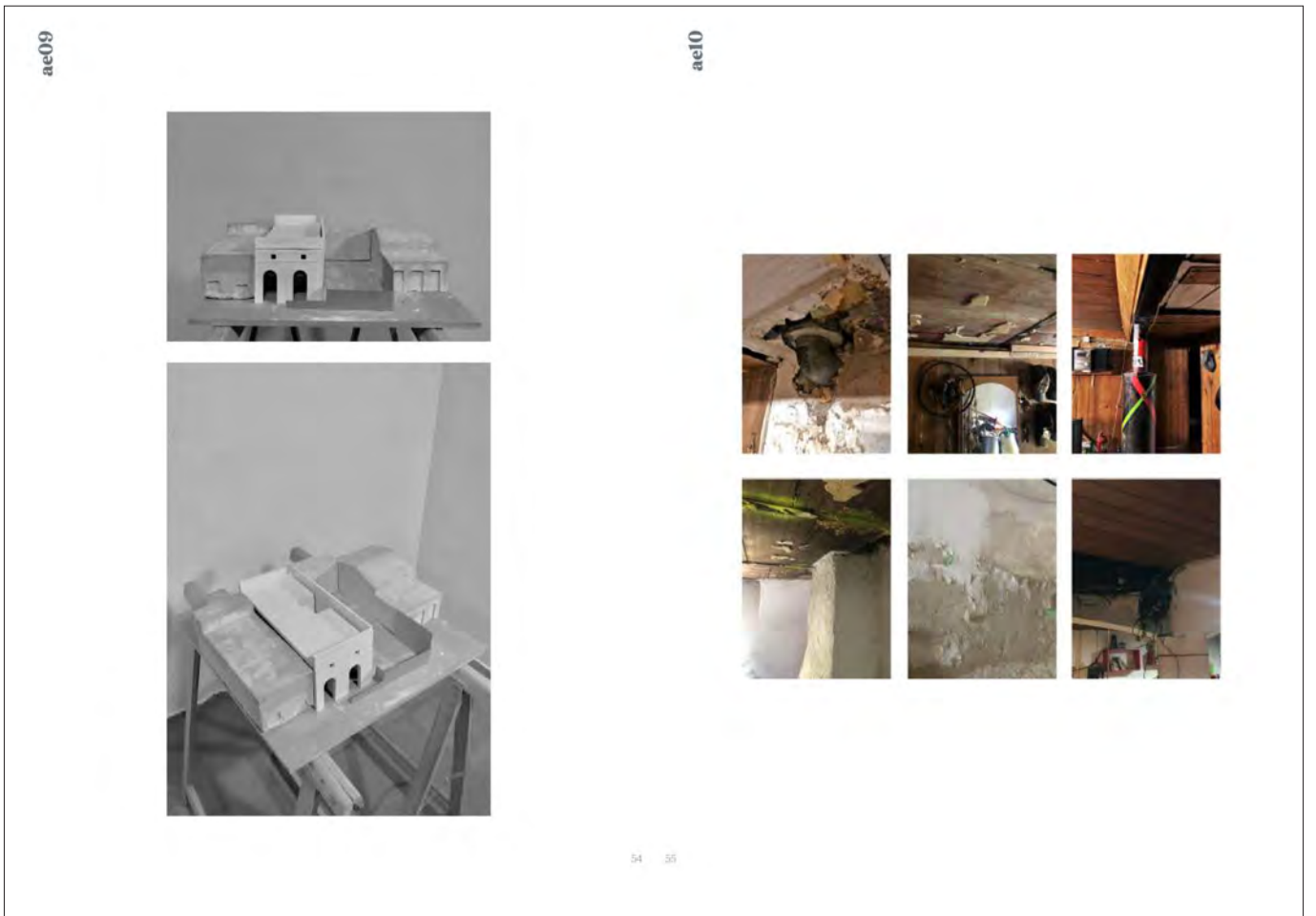
A Marroc es troben dos usuaris de contacte, el primer a la cantonada de Marroc amb Rambla Prim. Una tipologia amb un pati davanter, del qual els usuaris fan un ús habitual. El pati del darrere ha sigut conquerit per volums sense ús.

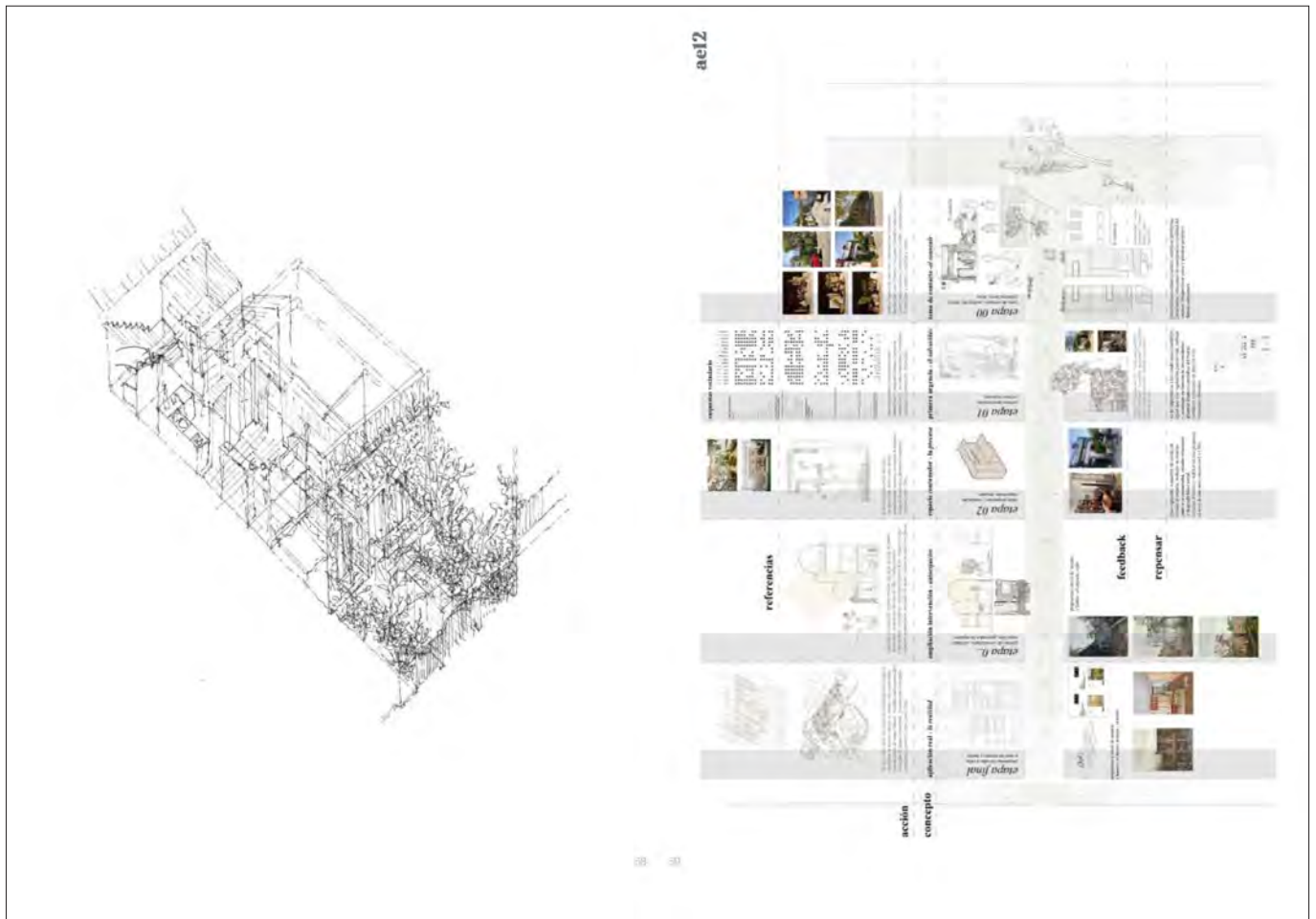
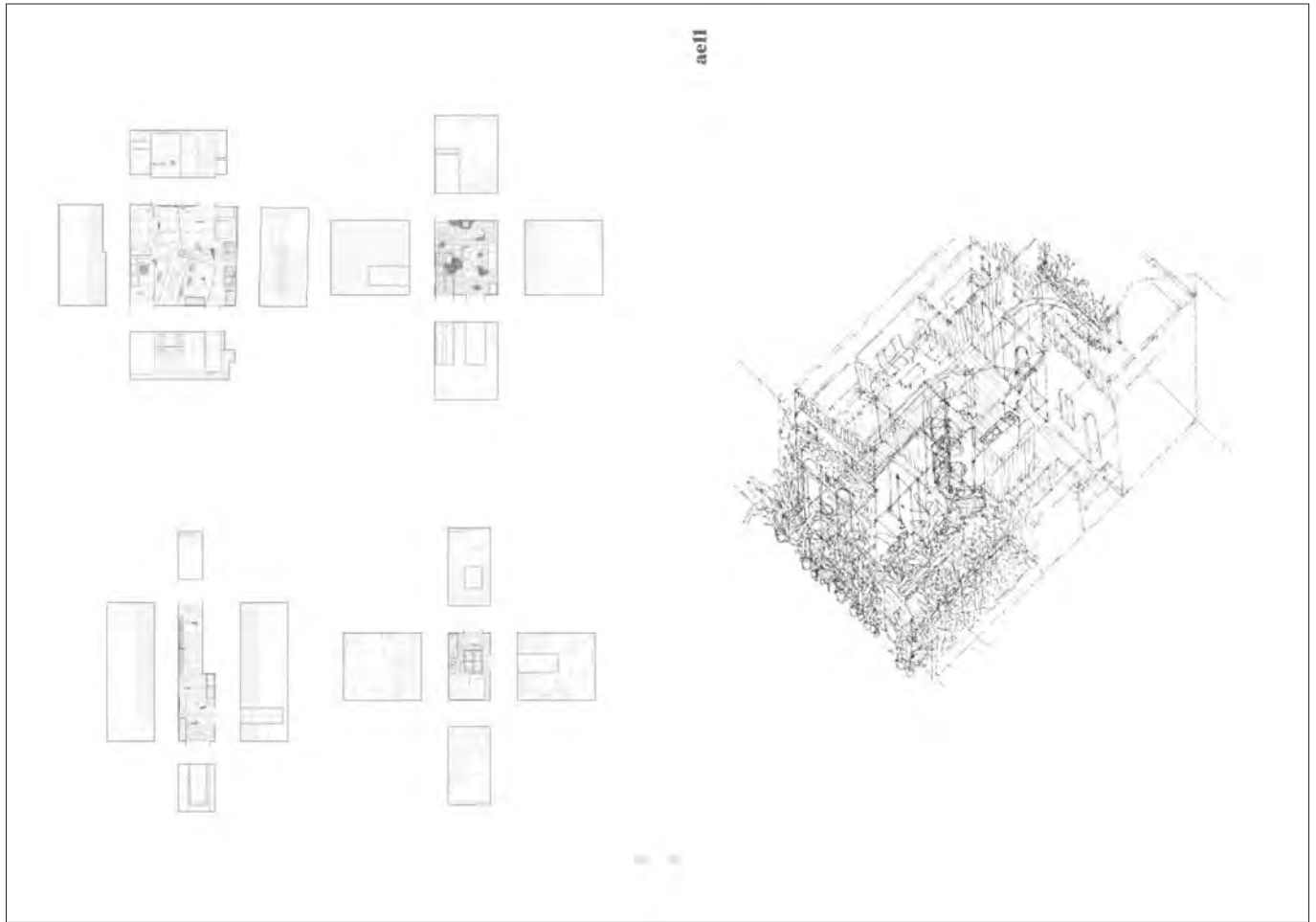
El segon es troba al final de la filera de casetes, es tracta d'una petita casa en planta baixa amb un pati davanter i un garatge a la parcel·la del costat.

L'últim usuari se situa al recinte industrial de ca L'illa, aquest amb un ús totalment productiu entre setmana i inhòspit la resta. Un espai tancat cap al barri.



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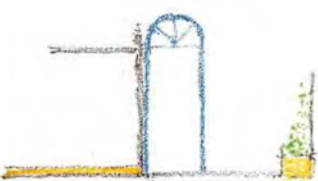
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Mitjançant les radiografies realitzades als habitatges dels usuaris es detecten diverses patologies i dificultats que suposen una mala qualitat de vida en els espais. Els principals problemes detectats en el barri són humitats, falta d'espai, decadència dels espais exteriors, instal·lacions en mal estat, etc.


Aquesta operació proposa les reparacions mínimes e immediates que necessiten les cases i els usuaris per tal de millorar les seves condicions. Aquestes acaben sent sistemàtiques.



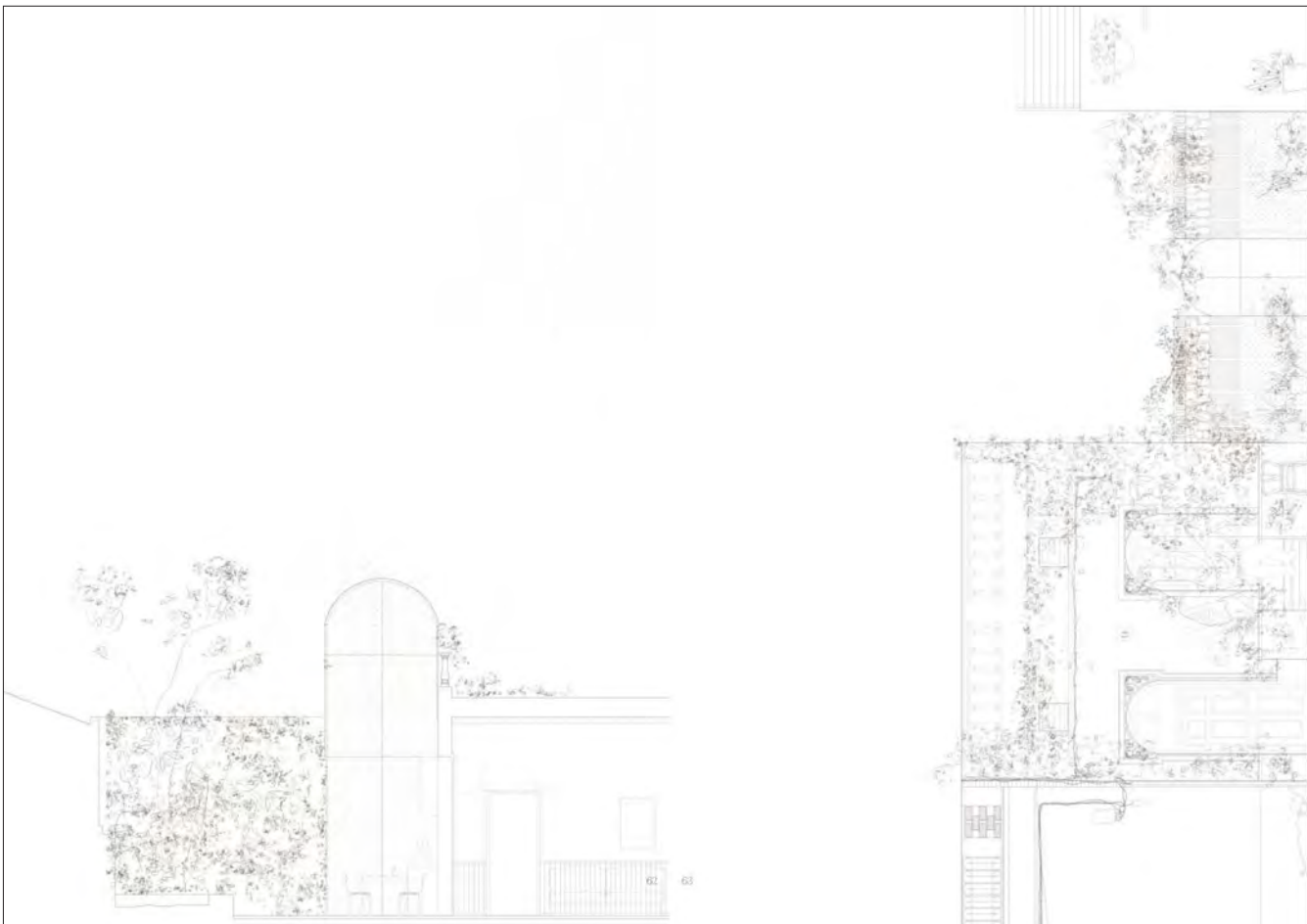
Casxí infraestructural que recull les instal·lacions
 Rehabilitació dels espais exteriors
 Reparació de forjat intermedià
 Sistema de recollida d'aigües pluvials
 SUDS d'escala domèstica



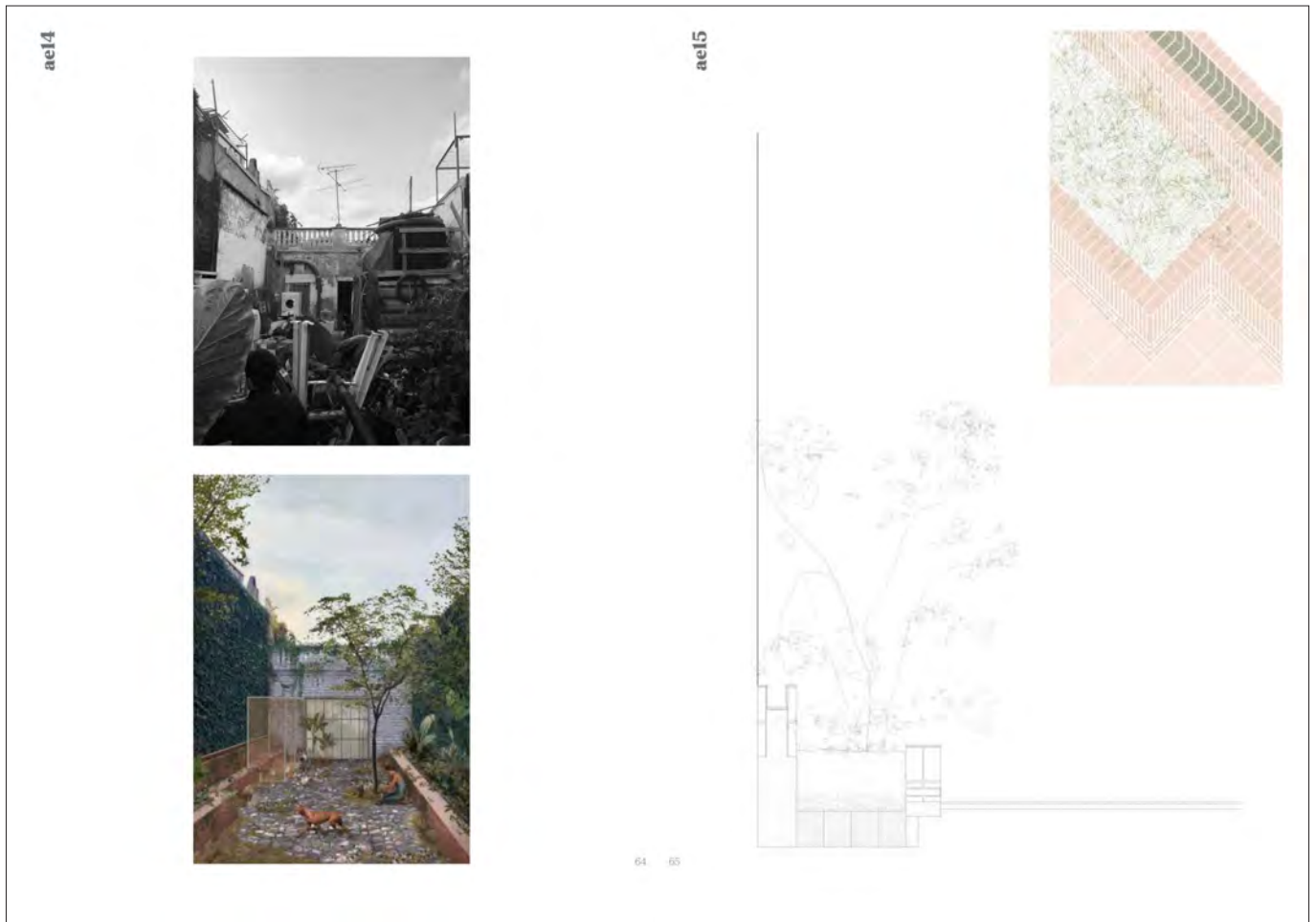
Col·locació de forjat sanitari
 Enderroc de volans afegit al pati
 Construcció d'itinerari bioclimàtic
 Sistema de recollida d'aigües pluvials
 SUDS d'escala domèstica

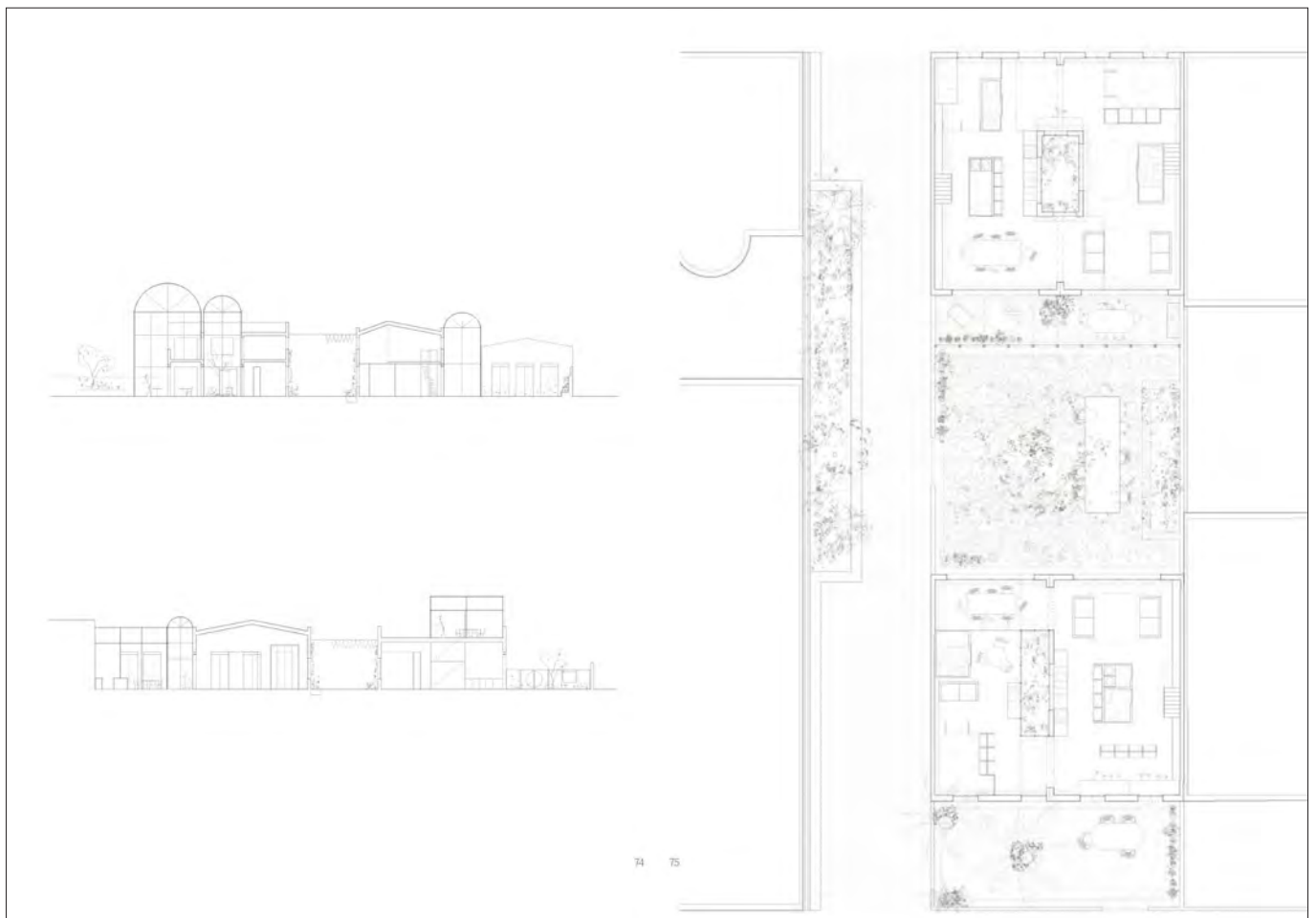


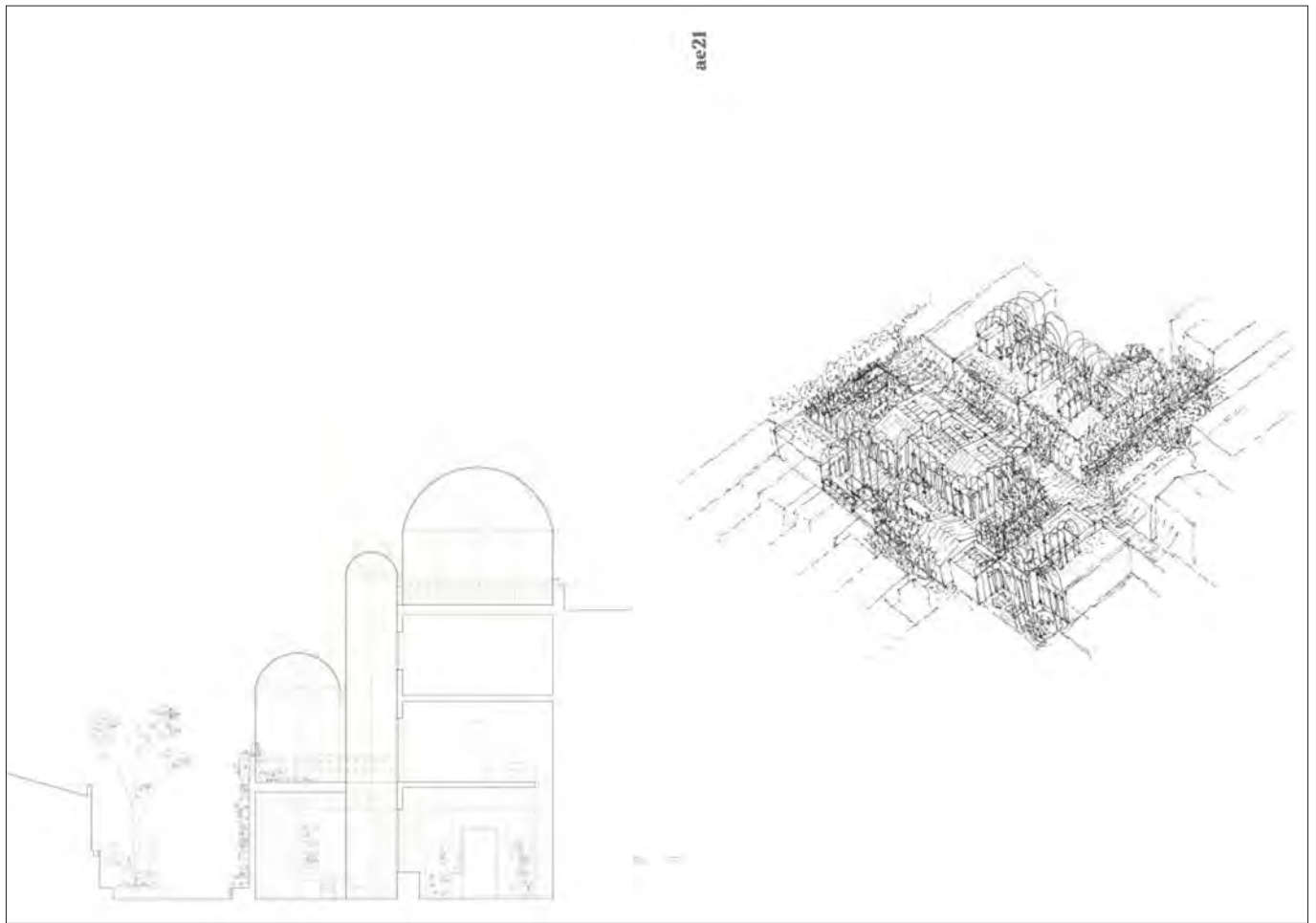
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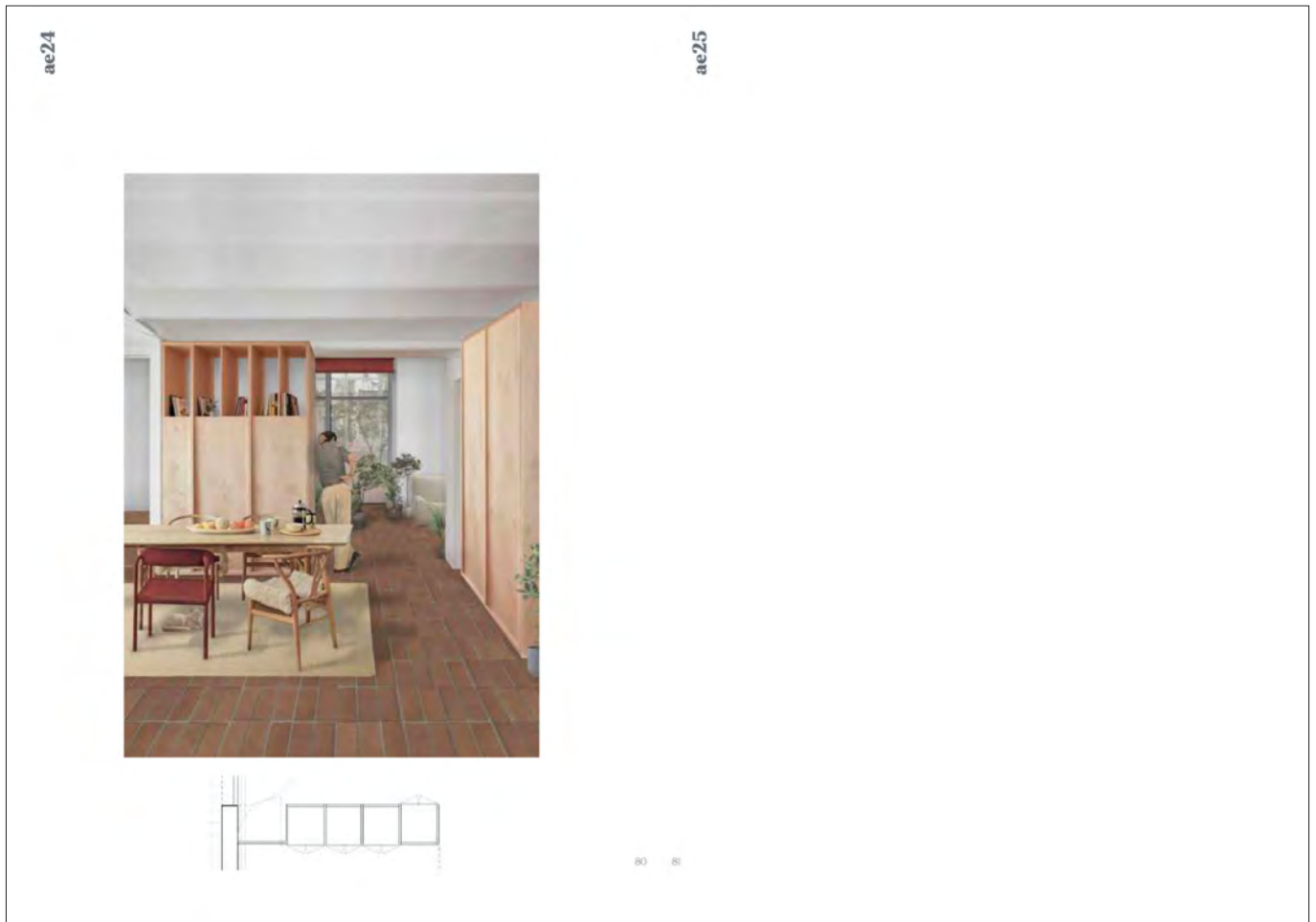


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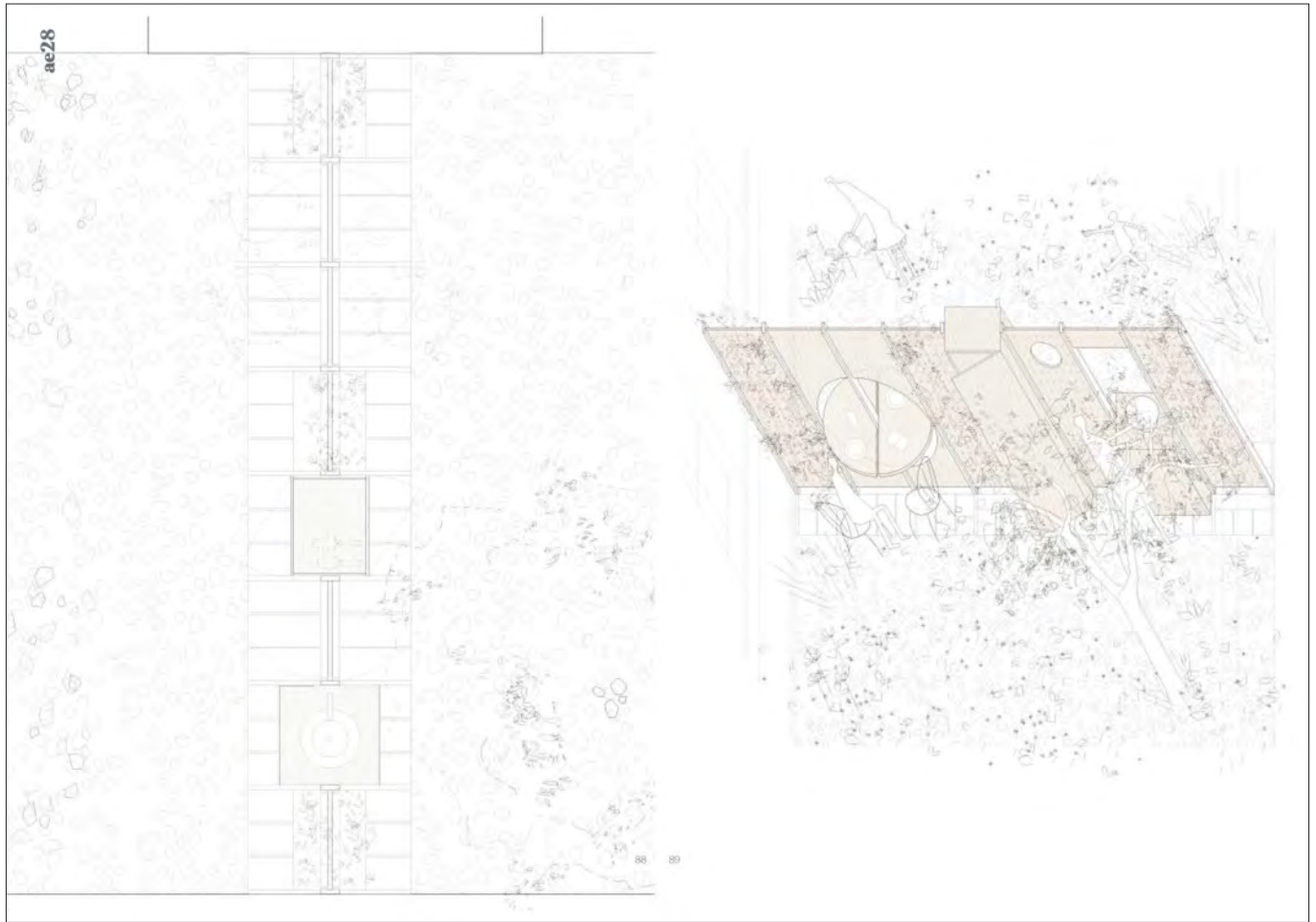












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referencias


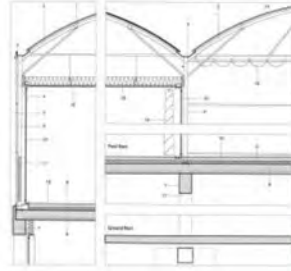



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r01 Flores Prats

Sala Beckett | Project | Flores | Prats Architects

r02 Lacaton & Vassal

Residential greenhouses by Lacaton&Vassal

r03 Jordi Adell





Reforma de Casa Pato en el Barrio de Sants | Jordi Adell

r04 Roberto Soto

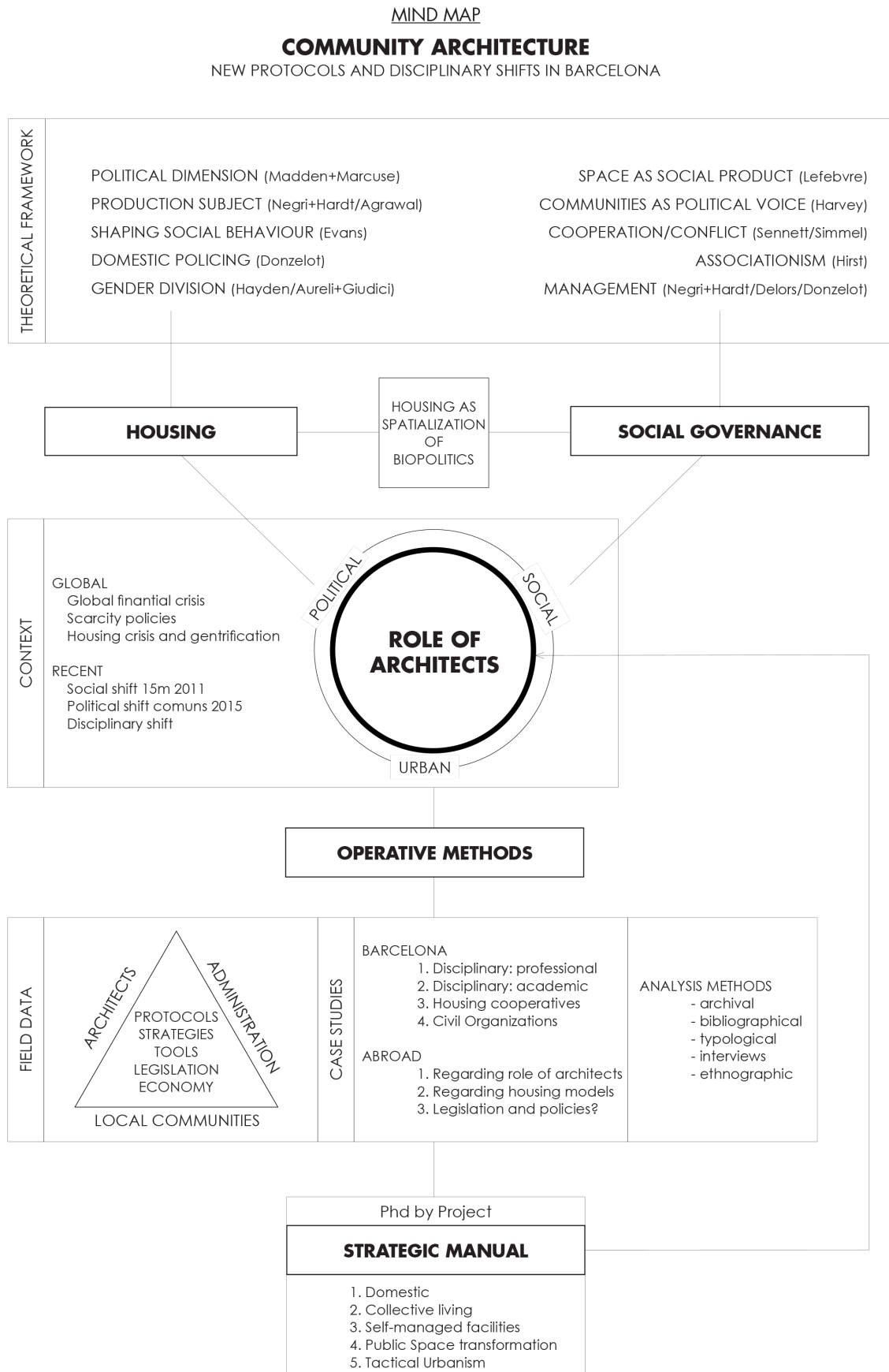


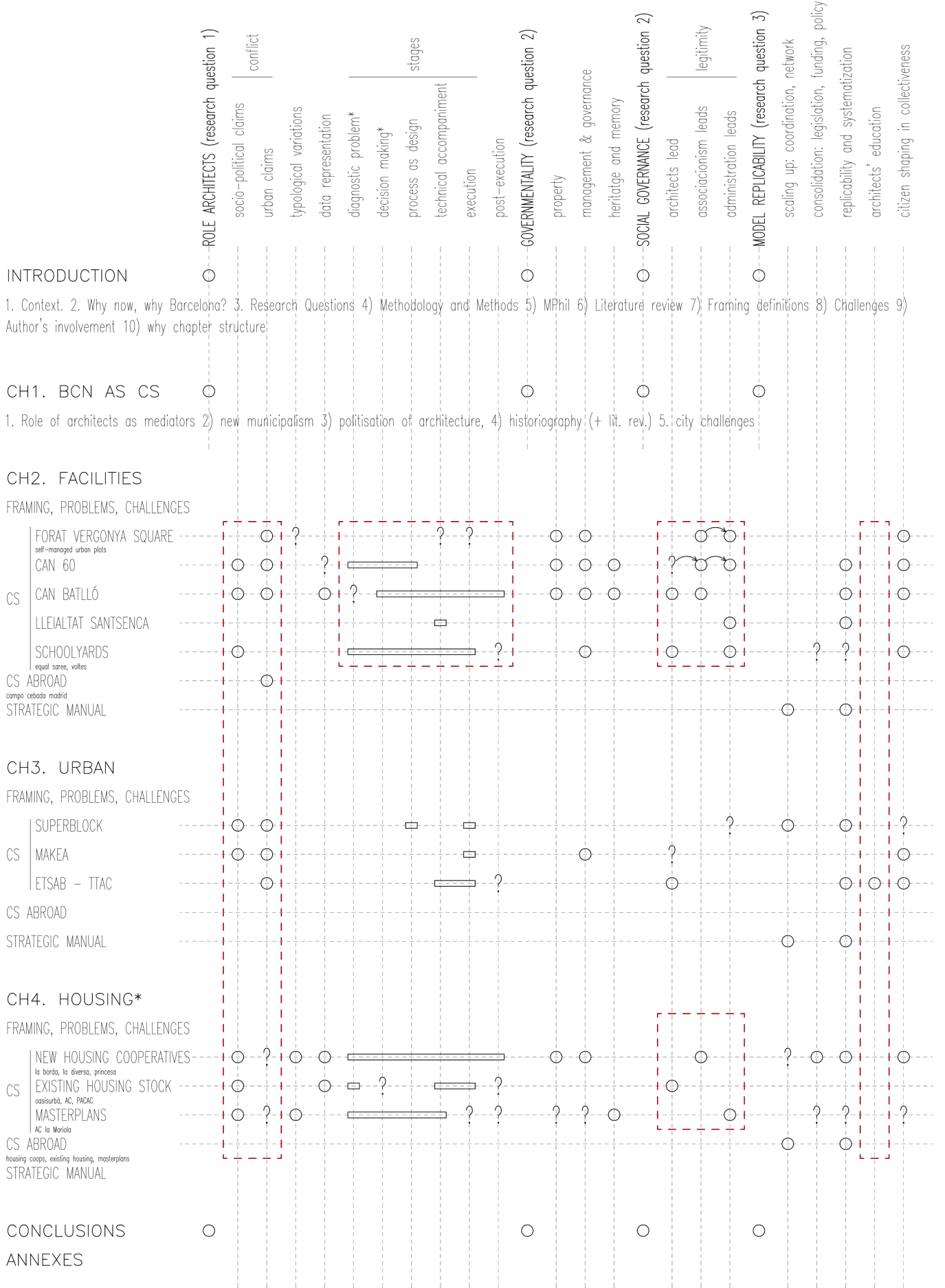



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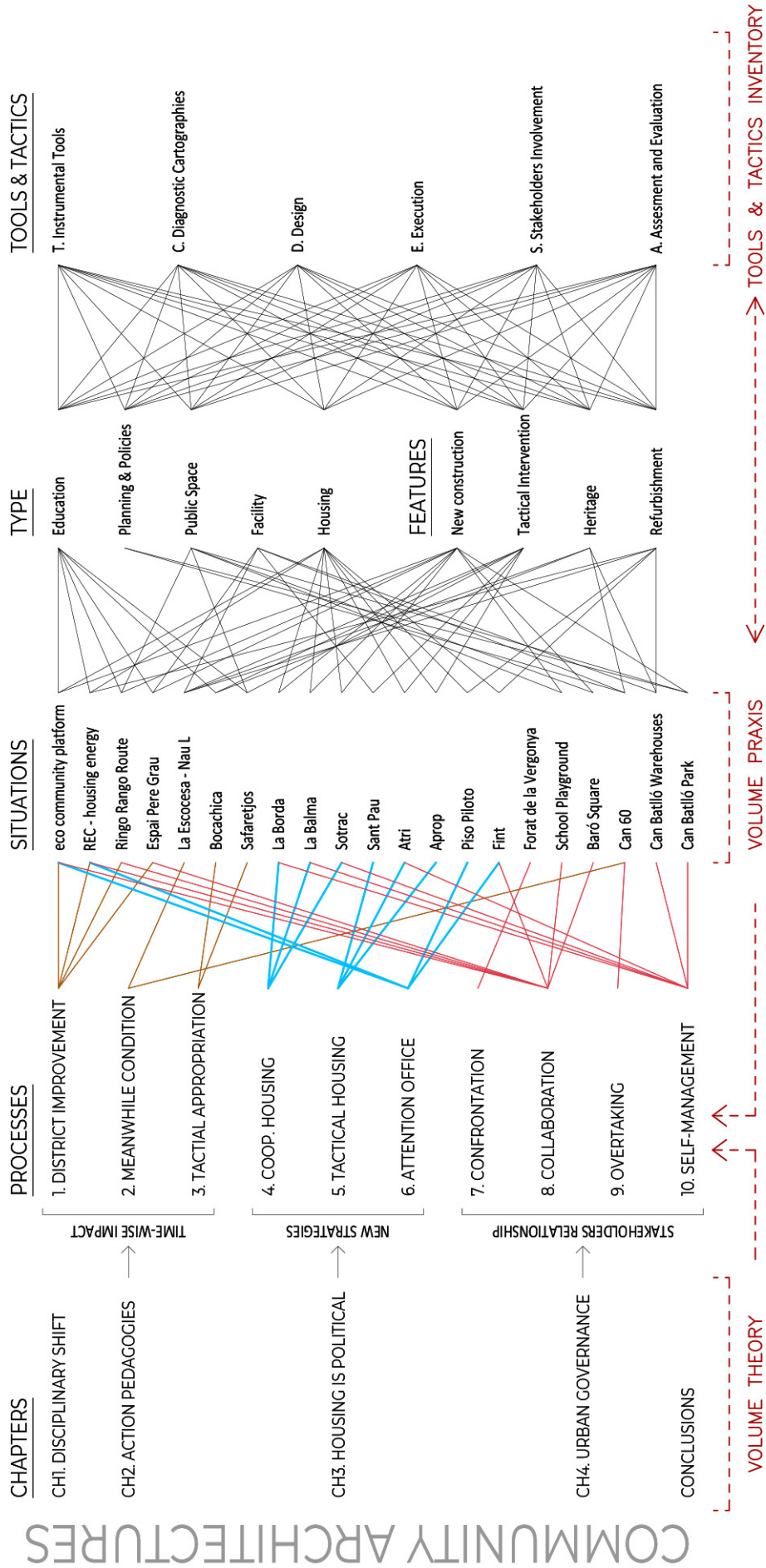
ANNEXE 5: THE GENESIS OF A RESEARCH: MIND MAPS 2017-2022

MIND MAP IN RESEARCH PROPOSAL (2017)





* see list of problems



URBAN TRANSFORMATION PROCESSES - CASE STUDIES

