RESIDENTIAL LANDSCAPES

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ARQUITECTES PER L'ARQUITECTURA

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IMPSOL Competitions: A Paradigm Shift

A combination of the desire to improve administrative procedures to facilitate universal access to design competitions, while also guaranteeing their viability, and the need to adapt future residential developments to the present in terms of typology, construction, environmental standards and social aspects served as the triggers that led to a reconsideration of the IMPSOL architecture competition model.

In traditional competitions, the architects' career and experience in housing design played an important role. Some years ago, this model was replaced with a new, two-phase competition, based on the principle of anonymity, in which the merits to warrant participation in the second round must be demonstrated in the proposal itself, an approach that offers broader possibilities when it comes to awarding commissions. At the same time, to support participation from young architects, the minimum technical experience is no longer limited to the designers and has been extended to include all the collaborators on the team. As for other important changes, budget discounts are no longer rewarded so as to avoid further destabilizing the industry, and the administrative documentation that must be submitted is reduced to a minimum.

In terms of qualitative aspects, in response to the climate crisis and the housing emergency, the risk of exclusion due to energy poverty and, more

broadly, the goal of improving people's quality of life, architectural quality and energy efficiency (NZEB) have become preferential basic principles in the evaluation of competition entries. Public institutions must work to ensure that they do not risk compromising the well-being of future generations. Sustainability, therefore, must be one of the priorities in new developments, as the buildings must seek not only to cover the residential need, but also provide buildings that should have almost net-zero consumption (through reductions in their ecological footprint, CO_2 emissions, waste generated during construction, and energy demand).

Another of the evaluation criteria is typological and technological innovation, which encompasses inclusiveness and the gender perspective. New ways of living should prompt a new housing paradigm designed for both the traditional family model and new kinds of households: space for hallways is eliminated to increase the size of rooms, so that every room can have similar dimensions; uses are made more flexible, and the groundwork is laid for possible adaptations in response to future changes. At the same time, the spaces for domestic use must have the same quality as other spaces; in general, they need to be open and make it possible for activities to be carried out by two people at the same time. Along the same lines, intermediate

spaces, both private and communal, both open and closed, are given a paramount importance.

In short, we have made a change from understanding housing as a product for a specific recipient (the people who live there) to understanding it as a common good: specific people use it, but society as a whole benefits from it.

Additionally, the COVID-19 pandemic has opened up new perspectives on the habits of the population. There has been a shift in values in the use of housing, which has reinforced the qualitative strategies associated with this new competition model.

Both the current competition model and the resulting architectural designs (some of which have already been built or are under construction) have been widely explained and communicated throughout the public administration, among architects, and also among the general public, and our efforts have been focused on transmitting the values we endorse, which are reflected in our projects.

Ramon Torra
General manager at Àrea Metropolitana de Barcelona (AMB)

Foreword

In the late 20th century, Barcelona and its metropolitan area became a true benchmark for the treatment of public space. The city's open and uninhibited vision, along with the joint efforts of all the implicated parties—politicians, experts, and citizens—brought about a real revolution in how we thought about public space.

Now, at the beginning of this new century, it is housing's turn.

New and evolving lifestyles, technological advances, as well as new construction systems, together with a decisive commitment to sustainability, are contributing to a new and more complex reality for housing.

This book aims to be a testament to that reality, where innovation is being intentionally incorporated into every area of new dwellings, from the systems for grouping them together to the typologies themselves, as well as new ideas about communal living, new industrial techniques and technologies, etc. And it is all framed by a discourse fueled by new knowledge and discoveries, with an eye to the future.

It is our hope and wish that the contribution represented by this book, realized with the implication of new joint efforts, will serve as an approximation of a new kind of housing for our times. At Arquitectes per l'Arquitec-

tura (A×A: Architects for Architecture), we celebrate the birth of this book with gratitude to everyone who participated in bringing it to life, and with the hope that further cooperation lies ahead in the future.

Ramon Sanabria
President of A×A

Introduction

Residential Landscapes: Geography to Ecology

This book is an editorial project rooted in two approaches to the residential landscape.

On the one hand, it documents that landscape based on a geographical understanding of dwelling, a description of the collective housing project from specific points of view. Based on these perspectives, the book is devised as a mechanism for a targeted observation of social housing, an observatory of sorts, that presents the ideas generated by a series of architects for the competitions convened by the Àrea Metropolitana de Barcelona (AMB) in recent years. The resulting compilation is not organized according to an aseptic categorization; rather, it is filtered through a lens that seeks out opportunities for reflection: some of them are intuitive, and others came about accidentally as a result of the technique we used in editing the book. To encourage these reflections, we asked the architects to respond to five questions: a question about technology, one about ecology, another a about the good life, one about socializing, and, finally, one about the future. The aim was not to put together a coherent, exhaustive, or overly

articulated narrative; rather, the architects were invited to share brief reflections, a kind of informal commentary, which resulted in a constellation of ideas. Their responses are arranged in no apparent order, highlighting the collective quality of the cross-cutting reflection. The second type of material is graphic. Most of the documents are taken from panels submitted to design competitions organized by AMB. This includes images, drawings, and diagrams that represent architectural ideas dealing with aspects of contemporary housing. Additionally, there are a series of photographs that depict the uses of recently built housing, taken by citizens. These design documents and photographs of daily life offer the context for a necessary debate on the future of collective housing.

In its second approach, the book presents the residential landscape from an ecological understanding of dwelling, as a dynamic functional relationship between its components. In that sense, the book is a compilation of fragments, ideas, images, technical documents, texts that are arranged in an unexpected way so that the user-reader can participate in the reconstruction of these relationships. Browsing and reading through the book becomes a performative act of design for the reader. Its fragmentary condition is the open field that offers the possibilities for as many different

intersections between images and texts as there are readers. In that sense, it invites a proactive reading, making the reader a participant in defining the ecologies of housing.

We could not end this brief introduction without thanking AMB for their support in editing and publishing this book, and we are especially grateful to all the authors who, through their generosity, have helped contribute to an inclusive and design-based vision of collective housing in Catalonia.

Andrea Caparrós, Franc Fernández,
Lluís Ortega and Amadeu Santacana
Barcelona, 2021

Questions

1. Technology

The technological solutions associated with housing have to respond to multiple interests, which are not always compatible: speed of execution, sustainable solutions, economic factors, industrial availability, among others. How would you explain the architectural strategies that are necessary to reconcile the various technological and constructive requirements inherent in housing projects?

Keywords: prefabrication, new materials, economy, speed of execution, life cycle, digitization

2. Ecology

The energy performance of the housing stock is of utmost importance in our response to the climate emergency. How would you harness the architectural potential of an ecological understanding of collective housing design?

Keywords: energy, sustainability, economy, thermodynamics, systems

3. Habitation-the good life

Social housing today responds to the desire for and the right to “the good life” in urban areas. There are as many versions of the good life as there are ways of living in contemporary society. What should the architectural priorities be to support the diverse habitat of the welfare society?

Keywords: regulations, comfort, lifestyles, flexibility, versatility, wellbeing, health

4. Socialize-urbanize

In housing projects, collective spaces and spaces of relation with the city are the areas where social and urban policies become most explicit. As semi-public spaces, by definition they become places where conflict has to be managed and where the most intense dynamics of socialization come into play. How do you understand the architectural and social setting inherent in any urban housing project?

Keywords: shared uses, associated uses, urbanization, politics, management

5. Future-desire

Collective housing is a mirror of society. It seems, however, that the changes taking place in recent years have been faster paced in the social and technological fields than in the considerations surrounding housing design. What should housing be that it hasn't yet become?

Keywords: emergency, desire, typological innovation, vision

Architects' Responses

We need to get rid of the entrenched perception of housing as a consumer good and tend instead toward policies that support affordable housing, for rent, with rotating services in a dense, mixed-use, well-supplied, and dynamic city. And we need to promote policies for public mobility that favor quality of life and the social fabric,

Fostering coexistence in diversity. Cities concerned for their inhabitants, caring cities that forge a sense of community, are necessarily dense. Compact cities that aim to reduce the environmental and climatic impact of urban mobility as a strategy to achieve more humanized, sustainable and balanced cities.

5. Future-desire MIM A (Mariona Benedito, Martí Sanz)

Architecture needs to offer protected spaces where users can carry out the activities of their daily lives, whatever they may be. Healthy, comfortable, flexible and versatile spaces. With the ability to be modified and evolve as the users' needs vary. Maximizing the minimum living spaces through multipurpose spaces/rooms: rooms that can be bedrooms at night and living spaces during the day (offices/workspaces, etc.). Promoting indeterminate, unprogrammed spaces that can be entirely taken over by the user.

3. Habitation-the good life SUMO arquitectes (Marc Camallonga, Jordi Pagès, Pasqual Bendicho)

Under the new building codes, all new buildings will need to be NZEB (net-zero energy buildings). In that sense, we are on the right track, but there are other issues of concern to ensure the sustainability of our housing stock. First, one pending issue is educating the inhabitants about the need to be environmentally responsible, helping them to understand that our actions can have a significant impact when it comes to stopping climate change. Passive strategies are useless if the users don't know how to make the most of them. Our buildings must allow their inhabitants to participate in the circular economy, with spaces for growing food, rooms for recycling trash, systems that recycle household water and capture rainwater, or spaces for storing sustainable vehicles. On the other hand, the most serious problem in ensuring sustainable housing stock has to do with older buildings.

In recent years, one of the most overlooked issues in residential architecture has been comfort, although it would seem only logical that this should be a key issue. Undeniably, in that regard, our grandparents' houses, with their high ceilings, cement tile floors, crown molding, double wooden doors, and balconies with louvered shutters, continue to create a sensation of wellbeing that has not been offered by residential architecture in recent times. And perhaps we should take some lessons from that.

No doubt that feeling of comfort has to do with the surfaces that surround the spaces—floors, walls and ceilings—and in particular with their textures. The more shadows are cast, by joints and moldings, the more comfortable a space seems. But it also has to do with the space's ability to absorb the user's own life, the objects that occupy their living space and personalize it, humanizing it. We should remember these details as we design living spaces, with the awareness that they must simply be the backdrop for people's lives.

During the pandemic, we have felt how fundamental social and collective life is, and how ways of organizing in groups to deal with difficulties emerge spontaneously and quickly. It is becoming more usual for collective housing to be equipped with larger common spaces, rooms and outdoor areas that can accommodate groups—spaces for celebrations, for working and meeting, for cooking, for childcare, for gardening, etc., as well as shared rooms for individual use as guest rooms or as auxiliary rooms to offer increased flexibility for different types of families. And that is something worth consolidating. Making certain building services and machinery collective is also a way to increment efficiency and economic savings. Examples include producing and storing energy, heating water, laundry, etc.

4. Socialize-urbanize Casanovas, Graus, Pérez arquitectes (Joan Casanovas, Ramon Graus, Ana Pérez)

Architects like Ludwig Hilberseimer and Frank Lloyd Wright imagined the importance of residential architecture in shaping the city, along with the impact that modern transportation infrastructure would have on urban space. Today, with the spread and pervasiveness of new information technologies, the disappearance of the concepts of interiority and exteriority in the urban environment, and the need for implementing urban policy that favors a change in the energy model, the post-industrial city is undergoing a series of transformations that are decisively affecting its configuration and its inhabitants' way of life. We imagine a slow and gradual dissolution of the impact of infrastructure in favor of the renaturalization of urban environments. The emergence of a new landscape that restructures the city and offers new ways of living.

5. Future-desire Xavier Vancells

Architectural well-being, most certainly connected with quality of life, depends on the quality of our living spaces, but also on the quality of the city and the territory. That quality has to be measured in terms of convenience and comfort, but also in the development of a *genius loci*—in other words, in how the architectural and urban form offer opportunities for the articulation of the community and for mutual recognition through their own material beauty.

Thus, in addition to well-being, in order to foster an emotional link between people and architecture, architectural form, the form of the city and that of the territory should bear in mind the architectural emotions that help us fit together as a society: including territoriality, the *genius loci*, hospitality, ornamentation, the picturesque, monumentality, and appeal. The relationship of a dwelling to the formal structure of the neighborhood, the city, and the landscape is tantamount to the individual's relationship to the structure of the community and that of society as a whole.

In recent years there has been a shift in our technological interests from questions related to industrialization, efficiency, productivity, and so on, towards an understanding of design that is less economic and more ecological. This transition (and we aren't the only ones who have experienced it) has helped us to uncover and incorporate constructive and thermodynamic strategies directly borrowed from architecture without architects, which are not always compatible with maximum efficiency and profitability. That is why, despite widespread consensus on the benefits of these practices, it is not easy to implement them—at least at a certain scale. The construction industry needs to adapt, but we also need to be clever enough to innovate so we can guarantee reasonable profitability for the agents who develop the city.

The crisis of 2008 destroyed the system for producing housing in our country. Classical banks and developers have disappeared, but that void is being filled. International funds have taken their place. Accumulations of capital, more concerned with exchange value than with use value. In the meantime, the public administrations (with some exceptions, of course) are dedicating their efforts to enforcing outdated regulations and planning frameworks.

It is crucial for the administration to play a more decisive role in ensuring new parameters for quality in housing and architecture to generate the necessary new urban and residential models. Without their intervention, in dialogue with everyone involved, and with architects generating new designs, that can't happen.

5. Future-desire

Josep Lluís Mateo

Collective spaces should bolster the relations between neighbors —relations that we had lost and which the pandemic has shown us that we need to recover. We might set up different levels of shared spaces within a community: street level, walkways/circulation cores/stairways and roofs. Ground floors should promote connection with the city, and they should also establish different levels of filtering to relate the community of residents to their street. They should not be sites of conflict, but places of opportunity to make public space more domestic.

4. Socialize-urbanize

Cierto Estudio
(Marta Benedicto, Ivet Gasol, Carlota de Gispert, Anna Llonch, Lucia Millet, Clara Vidal)

There are many examples we can study, monitor and model from the building traditions in the settings where we work—which are, by definition, sustainable, low-cost and of proven viability—which we can improve on and reinterpret with the technology we have at our disposal. We have forgotten how to practice architecture in the sense that architecture already includes the ecological and economic aspects, because by definition architecture is sustainable or it cannot exist. We can't understand the standardization/globalization of solutions that don't take into account the immediate environment. We strongly believe in local specificity and singularity. How can developments in mountain areas, coastal areas, inland areas, etc. be given the same objective criteria? The needs and possibilities of every location are entirely different. We need to go back to the origins, tapping into the local tradition of construction.

1. Fostering the capacity for adaptation and implementation over time, from the standpoint of habitability (flexibility) and technology (resilience).

2. Moving away from monofunctional specialization, understanding housing not only as a place where the productive and reproductive spheres come together, but also as a place for unproductive activities associated with leisure.

3. Understand housing design as a cultural artifact with the ability to support different imaginaries and sensibilities.

Housing should be an inhabitable structure.

Sharing is understood on four levels: sharing activity (flexibility in the dwelling, changes in the space and over time); sharing a dwelling (co-living), sharing spaces (common spaces and collective spaces); and, finally, sharing uses (hybrid residential buildings, mixed residential uses, and facilities or services). From the bedroom to the neighborhood, from the intimate sphere to the public sphere.

Housing should not be the context for conflict, nor is it the place where socialization dynamics should be deployed. That function should be allocated to public space, the space of the street, where people coexist voluntarily, and which can be given an educational function. Public housing will be the container for a series of social relations among a low-income segment of the population that cannot choose a different way of life; forcing users to coexist in “conflictive” spaces seems unjust and moralizing. We believe that communal spaces must be just the right size in order to prevent conflict instead of having to manage it: pedestrian bridges, for example, are a last resort for us, useful only in small and medium-scale buildings and accompanied by a series of complementary resources that prevent them from becoming “conflictive”.

4. Socialize-urbanize fàbric (Pau Casanova, Pedro García, Alain González, Javier Hernani, Toni Ferrari)

We need to ensure that the public housing stock is very diverse and varied to encourage the mobility of tenants in keeping with their needs over time. That means avoiding formalizing housing according to established patterns. There should be greater diversity, more mobility, and more awareness that public housing is a common good.

3. Habitation-the good life Emiliano López Matas (Emiliano López Mónica Rivera Arquitectos)

In recent years, a favorable environment for typological research in collective housing has been created through public competitions that have rounded out the good work done by universities and other platforms. As a result, a series of interesting and radical designs have been implemented that have become immediate touchstones. A lot of the research focuses on creating flexible living spaces that aim to respond to a growing social diversity. Thus, the obsolete typological standard of modernity has given way to the perhaps too recurrent isotropic spatial sequences of consecutive and functionally unspecialized rooms, which, it is worth saying, do not always reach the level of excellence of the pioneering examples. It is an interesting line of research but, just as added flexibility in regulations and the generosity of certain public companies dedicated to housing development have made it possible for us to move forward in that direction, now may be the time to reconsider the limits of urban planning.

Medium- and long-term planning is required to generate housing that integrates multiple interests. Planning and industrial availability are linked to demand, and demand ties back in with planning. The speed of execution should be derived from the corresponding approaches of prefabrication and industrial availability. Sustainable solutions require innovation, experimentation and, consequently, experiences of corroboration. It is necessary to find the right time, context, and scale of intervention for testing and prototyping, leaving the speed of construction as secondary.

In the current cyclical context of crisis, developers are looking for certainties and, in general, their praxis dismisses innovative steps forward. To escape from this impasse, it is a priority for the entities engaged in development, especially administrations, to communicate to construction agents their interest in promoting the use of local and ecological building materials and construction systems.

The tempos in the construction industry are slower than in other areas, like the digital world. Many of the living spaces built over 100 years ago can still be used today. Reformulating and reusing what has already been built should be one of the priorities in the current emergency, in order to optimize resources, reduce energy consumption, and respond to the growing lack of housing.

5. Future-desire SUMO arquitectes (Marc Camallonga, Jordi Pagès, Pasqual Bendicho)

Residential buildings interact with other spaces. They are incorporated into and open onto collective public space.

Housing interacts with other uses. People need to socialize, and in that vein architects need to know how to deconstruct the hard limits of the spaces we create. This is incredibly important in making cities more amenable and livable, and it requires participation from all the “agents” involved in the process of city making.

The relationships that take place in the urban environment, or even in the common spaces of collective housing, engender a more human-friendly city. This is not only achieved by introducing greenery in urban spaces, but also by creating spaces where people can interact: meeting points and safe spaces that support wellness.

4. Socialize-urbanize Anna Codina Ramells (VOL studio architecture)

It is becoming increasingly uncommon to find designs that don't incorporate the concepts of passive systems, natural cross ventilation, natural lighting, sun protection, etc. This is a success for the profession as whole and especially for the public institutions that have always promoted it, with IMPSOL at the forefront. We would like to add two points to this already widespread and shared system:

– The importance of monitoring: residents will have more autonomy and be able to live more sustainably if they have the tools to understand how much energy they are consuming at all times.
– Many large-scale residential buildings are outfitted with large spaces for enough solar panels to produce more energy than what is necessary for the buildings' own consumption. Wouldn't those locations be ideal for solar panels to power street lighting? The alternative is battery boxes, which are often incompatible with or detrimental to the urban landscape. If the possibility exists for civic buildings, why not for public housing?

Urban housing as a community should enact the paradigm of socialization —common areas that take on the role played by the street in our grandparents' villages, where we'd play while our grandmothers sat in the shade chatting with the neighbors. There are roofs, porches, patios, etc., opportunities that become underutilized spaces. We can't even share a hot water heater and we want to talk about putting in shared laundry facilities! We think that the administration has been ineffectual when it comes to proposing more socially oriented models. For example, in public competitions it can be hard to make the most of intermediate spaces, exteriors, walkways, etc. which offer a clear opportunity to extend private indoor life into the outdoor communal spaces. There are always excuses that decision-makers use to brush off responsibility: questions of gender politics, safety, maintenance, management difficulties, potential for conflict, etc. Do we want to get past the "cottage and kitchen garden" model or don't we?

The response to the climate crisis, the most recent regulatory changes, and a certain amount of pressure from public administrations have been accruing into a collective body of knowledge on issues such as evaluating the environmental impact of building systems, energy efficiency during the useful lives of buildings, or sustainable water management. The associated risk could be a simplification and standardization of this knowledge, which might be reduced to a quality seal doled out for compliance with a handful of clichés. We need to approach the design of collective housing from a holistic perspective: construction that harnesses available resources, spaces that take into account their thermodynamic implications, etc. But we also need to adopt more strategic stances: for example, giving up parking structures under every apartment building in a context where mobility is being transformed, pooling building services, re-inhabiting structures that have become obsolete, etc.

Our main desires in the sphere of housing, from the most general to the most specific, are: 1, guaranteeing the right to housing to address an increasingly serious social emergency. 2, making the most of the built housing stork: rectifying deterioration and the number of empty units in the central areas of most of Catalonia's medium-sized cities. 3, combining housing, the street, and the city at large into a single reality, designing them as a whole; the wholesale urban project is much more effective than the traditional division by sectors; encouraging mixed uses, healthy habits, urban comfort and, above all, socialization. 4, developing buildings that are resilient from the point of view of consumption and their environmental footprint, and their capacity to adapt to their inhabitants' changing needs without any remodeling. 5, aligning technology and ecology towards the most important goal: ensuring quality of life.

The landscape that has been built in and around our cities has often evidenced the miserable vulgarity of patterns of routine that are anachronistic and generally unsuited to the geographical, environmental, and sociocultural context: archetypes and *standards* settled within the secure guidelines of an ambiguous, eclectic, and conservative (if not voluntarily conventional) *neolanguage* of status quo regularity (and regulation). In the face of this new heterogeneous and open nature of our environments for living and relating, today, we need criteria of "intersection" (interactive, mixed, relational) that are equally attuned to the strategy of the global sphere (plural) and the exceptionality of the local sphere (unique). Attuned to a new kind of encounter between programs and uses, activities and communities, densities and natures, environment and means, processes and resources, and, therefore, to the conception of new kinds of actions that are more *mediating*, as opposed to aesthetic typification or mere postmodern neoliberal speculation.

I don't see a contradiction between the new construction systems, an increase in prefabrication, and the digitalization of the design and construction processes in relation to sustainability (reduction of the ecological footprint, low energy demand, and use of renewable energies), comfort, and architectural quality. The conflict emerges when you want to continue to build at a cost ratio of euros/m^2 that makes that quality (already required by the current building regulations) impossible to achieve and with designers' fees that are less than half the European average. In the same way that countries like Finland are strategically committed to education —understanding that investing in children today is the best way to promote an educated and conscious society for tomorrow—investing in quality housing today will help ensure a future housing stock that offers conditions of health, low energy demand, and low environmental impact.

Sustainability and ecology will not and should not be the defining elements or the justification for architecture, but rather implicit qualities that are intrinsic to every project. Architects will continue to work to ensure the balance between all the factors involved in a design—with sustainability among them.

The societies we live in are subject to rapid change. Precisely because of that fact, our priority should be reversibility. We should be able to build habitats that are easy to change, that can be reinterpreted or reused. The key is indeterminacy de-hierarchized, flexible, fluid spaces that can be used indiscriminately. From the public sphere, rather than focusing on housing, we like to think that the focus is on support to provide the specific habitat required for each dwelling unit. In the private sphere, however, the concept is more closely associated, unfortunately, with creating a product than building a habitat. That is why it is essential to promote and debate the public view of housing through public efforts and by way of example with the goal of influencing private developments.

There isn't much left to learn. We need to provide projects with enough resources so we can construct with better insulation using solutions with higher thermal inertia, controlling losses from infiltration (airtightness) by using windows and doors with high thermal performance, controlling solar gain in relation to the heat transfer through openings in the building envelope and overheating problems due to a lack of solar protection, etc. We need to design compact, well-oriented buildings with dual aspect units to ensure cross-ventilation, with intermediate spaces that allow for modifying the building's form factor; dissipating faster when needed, implementing efficient active systems with energy recovery and with minimal load losses in centralized building services; installing solar panels to get closer to net zero or self-consumption, etc. We already know how to do all of these things. All that's missing are the resources and smart, multidisciplinary competition juries who are in alignment with those objectives.

2. Ecology

Pilar Calderón (Calderón-Folch Studio)

We believe it is important to reflect on the need to reconvert the existing industry. Current systems of prefabrication need to be expanded to make it possible for production to take place locally. We need companies to produce CLT or similar products. These initiatives should be incentivized by the administration, funded by national or European subsidies. One good example is Egoin, a Basque company that was founded using subsidies from the Basque government.

1. Technology

Cierto Estudio
(Marta Benedicto, Ivet Gasol, Carlota de Gispert,
Anna Llonch, Lucia Millet, Clara Vidal)

The housing of the future must address the lack of a sense of community and individual isolation, and it should help us get back in touch with nature.

5. Future-desire

Pilar Calderón (Calderón-Folch Studio)

Designing architecture based on the effectiveness of passive sustainability. It can conserve energy in winter (compact form factor, thermal insulation, preventing thermal bridging and promoting heat recovery, heat trapping galleries, trombe walls or parietodynamic walls, south-facing atriums) and protect us in summer (sun protection, natural ventilation for comfort and health) without the need for technology that is expensive on both an economic and ecological level.

We need a paradigm shift in housing with respect to cars. Disassociate having a place to live from having a private vehicle. Rethink the mandatory presence of underground parking structures that lengthen construction times and hike up budgets, demanding huge, absurd numbers of parking spaces that often impact groundwater flows.

2. Ecology

MIM A (Mariona Benedito, Martí Sanz)

1. Open and inclusive strategies that emphasize social sustainability (flexibility and adaptation) and environmental sustainability (reduction and impact).

2. Political strategies that understand public housing design as a research laboratory —in other words, as a leader in technical and material research. Promoting this research beginning with public tenders all the way through to the implementation on site. Providing financial support for the points above.

3. Understanding the complementary relationship between multiple interests as part of this research. Understanding design as a negotiation between parameters that are not always compatible: speed of execution, economy, industrial availability, craftsmanship, sustainable solutions, etc.

As the spaces where what the question calls an “architectural setting” offers inhabitable conditions that can be interpreted as freely as possible by the inhabitants, thus promoting socialization among them.

In a chapter of her book *Ciutat Princesa*, Marina Garcés explains how she remembers a colleague of hers quoting Gilles Deleuze, saying “My house is, unfortunately, a house.” In a reflection on habitability, she asks: “What would be, or what could be, today, a house that isn’t a house? In other words, can we aspire to something more than a shelter for sleep, study and intimacy, in a city, in a world, that leaves so many people at the mercy of the elements?” It is precisely through the management of the elements, in housing projects, that we try to transcend domestic space to provide a collective condition for dwellings beyond the difficulties imposed by the dogma of the “ratio” of gross floor area to net internal area or the question of “Who is paying for this?” To date, lobbies, atrium spaces, access terraces, porches, shared laundry facilities, oversized landings, balconies that run the length of buildings, and certain shared gardens have been the spaces of opportunity to endow our housing projects with collective uses.

Collective housing should introduce uses other than housing to form an interconnected invisible network in which individual residents can make use of different spaces in the buildings where they live. Today, and in the wake of COVID-19, the number of people who can work remotely has seen a dramatic increase. Multi-family buildings could include not only commercial spaces, but spaces for communal services such as coworking rooms or multipurpose rooms for yoga classes, workshops or courses, children’s play areas, lectures or film screenings—in short, incorporating shared uses which, in addition to promoting social relations between neighbors, would also support the “15-minute city” and help cut back on urban pollution. It would extend people’s living spaces beyond their front doors, since they could live on the second floor, for example, work remotely from the fourth floor, exercise on the roof, and watch a movie on the ground floor.

I am interested in housing as a right in societies, where architects have a duty to understand the richness of the many different societies that housing must serve.

I don't think that the concept of emergency, referring to the dwelling of the future, is rooted in reflections on quantity, type, form or construction process.

The complex reality of habitation must be managed based on shared knowledge from architecture, the field of humanities, the environment and the law so that, as part of the effort, there will also be the will to alter those elements that corrupt and that stand in the way of rights and freedoms.

The dwelling of the future, like that of the present, designs society through the ways in which individuals move through space, in dialogue with it, transferring their knowledge and values. My wish is for the house of the future to be designed using architecture's potential as a means of communication to design a better world.

1, "Only one in 10 social housing units is intended for rental use" (*El País*, April 16, 2021)—15.1% in Catalonia; 2, the minimum ratio of surface area per inhabitant is 18 m^2—in Europe 40 m^2; and 3, the surface area of terraces is limited to a maximum of 10% of the net interior area.

Much of society would agree with the idea that a residential building should be more than just a place for its inhabitants to sleep. Communal spaces are essential to strengthen social relationships and the sense of community between residents of the same building. The new Decree on Coliving in Catalonia makes it possible to reduce the surface area of dwellings so long as it is replaced with surface area of communal spaces. Will that help mitigate the lack of public housing at a time of crisis like the present? Or will it just push developers to misuse this option to chase higher profitability? In some cases, the administration could allow the installation of communal spaces for residents in place of commercial spaces on the ground floor. In many areas of our cities, ground floor properties sit vacant because the regulations require that they be commercial even against better judgment, when they could potentially be used as communal spaces for residents with a connection to the street and the city.

4. Socialize-urbanize

Josep Batlle Blay (Batlle i Roig Arquitectura)

Housing should be a non-speculative good that guarantees environmental quality (in terms of resource consumption and impact) with the same stringency and commitment dedicated to guaranteeing structural, functional, and aesthetic quality, etc.

Housing should create the living conditions to respond to people's needs without neglecting the determining factors in their socio-economic and cultural contexts.

Housing design should take into account, with the same intensity and rigor, aspects related to both the container (the building) and the content (the users); a balanced and fair consideration of those two fundamental variables will help offer an adequate response.

5. Future-desire

Societat Orgànica
(Luca Volpi, Gerardo Wadel, Albert Sagrera, Fabián López, Pablo González)

The Habitability Ordinance is fundamental. In Catalonia, it offers broad guarantees of a well-finished living space. It leaves no room for the incomplete housing demanded by Jeremy Till and Tatiana Schneider to encourage flexibility and user performativity, which would make it possible for the same model to offer variants for different kinds of users. Therefore, housing that is flexible (in its uses), adaptable (over time) and performable (in which users can intervene).

The urban planning for peri-urban areas forces a lifestyle centered on private mobility. There needs to be a strategic shift in the standards that regulate housing towards a reading of the surroundings meant to densify and build mixed neighborhoods, with production and businesses, before creating new satellite neighborhoods. Promoting mixed collective housing in pedestrian-friendly, locally focused and dense environments that promote eco-interdependence. Building a community where we can care and be cared for.

Over the last 100 years we have seen how the average surface area and volume of urban housing, regardless of social class, has decreased progressively. The 19th-century “dwelling made up of identical rooms” defended by Xavier Monteys as a proposal for the future, is a luxury and an example of flexibility—not because the rooms are similar, but because the spaces are large both in size and in height. Different things can happen in them at different times; different things can even happen in them at the same time. Today, we aren’t asking our houses for anything substantially different or new compared to what we asked from them yesterday. And we won’t be asking for anything substantially different tomorrow, due to the simple fact that we are the same species that has carried out its private life in protected areas for at least 1.5 million years when our ancestors left behind the protection of trees, with the help of fire, for the protection of architecture. What housing should be, but hasn’t yet become, is simply what it once was but has ceased to be without our realizing it.

5. Future-desire

Arturo Frediani

In housing projects, the use of technology depends on the budget. We try to use it as a tool for savings based on the inputs of each project. That is the case for the technology associated with reducing energy costs, whether in active or passive systems.

Industry and research are evolving a great deal in terms of improving the sustainability of technological solutions, and architects should participate actively, across disciplines and in all areas: industry, research, real estate development, etc. Designers need to take advantage of a growing social awareness in industry—which has translated into more research and the launch of new construction systems and materials—to apply this technology in areas that generate the most sustainability, particularly in collective housing, where it is essential to incorporate these technologies as a resource that comes from balancing the factors of cost, time and sustainability.

1. Technology

Anna Codina Ramells (VOL studio architecture)

“Implementing dynamics of socialization” by whom and where? Why do we always take it upon ourselves to attend to the sociability of certain classes and not others? Why do we take it for granted that, when it comes to the poor or immigrants, we need to supervise their conduct in “communal” spaces, but in high-income or medium-income housing no one would think of interfering in these spaces for relating—which are largely non-existent, incidentally, beyond shared swimming pools? Turning circulation areas into spaces for forced socialization was a chimera that gave rise to great buildings, but it was never truly successful in reality, or only in cases involving more affluent residents or those who already knew one another. The less “mandatory” contact we have with our neighbors, the better. Sharing is positive when it isn’t forced, and when it doesn’t interfere with our lives “behind closed doors”. Non-segmented sociability should be promoted on the street, in public squares, at public swimming pools, in parks and in libraries, beyond just the short-sighted concept of a “community of neighbors”.

Technology as applied to construction is a constantly evolving concept, founded on continuous changes, throughout the life of a building, to the systems that have been implemented in order to respond to new needs, trends or market demands. The precepts of architecture, on the other hand, are more timeless or subject to a much slower evolution. We need to require residential buildings to be designed and built in a way that is flexible enough to continue incorporating new technologies. The technical and constructive solutions that have been viewed as timeless until now, in that sense, have been proven to be more flexible than grand technological ostentations, which, although they may incite a lot of interest at a given point in time, can easily become obsolete.

This question affects all our activity, and our responsibility is to offer professional and artistic responses, not political ones. In the case of housing there is a lot of information: the relationship with the exterior and the landscape (more important than ever), technical issues such as insulation (in terms of energy, but also sound), and social connection versus isolation.

The architectural machine should relate first and foremost with environmental phenomena in order to provide people with the most natural and adaptive comfort possible. This relationship between architecture and the environment must reveal and make explicit everything that is invisible in architecture: the haptic and emotional perception of inhabited space.

Intermediate spaces and bioclimatic architecture are obvious examples of this strategy of collaboration between building and environment. In these kinds of spaces the figures of ownership, use and privacy are also diluted in favor of more collective and unprogrammed forms of housing.

We are more interested in these spaces as tools for constructing a sense of natural comfort in order to provide unique spatial and experiential qualities, more than for their role in hosting community activities. However, it is nonetheless true that it is in collective and communal spaces, which exist in an intermediate stage in the interpretation of property and privacy, where both approaches coexist and complement one another.

Everyone recognizes the merits and advantages of dense and compact Mediterranean cities. This “quality of life”, as we usually call it, is a combination of our weather, our architecture, the diversity and complexity of uses and information, efficiency in the consumption of resources, etc. However, these advantages contrast with certain environmental problematics (and other social ones) that need to be taken into account, and which the short and medium-term efforts in different fields are aiming to overcome. From the Sustainable Development Goals (SDGs) on a global level to similar programs in the city of Barcelona like the Pla Clima [Climate Plan]. The most well-known problems are the ones that directly affect city-dwellers’ health, such as air and noise pollution, caused in large part by high concentrations of private transport. Collective space (both public and private) plays a key role in social aspects but also in environmental ones.

Societat Orgànica
(Luca Volpi, Gerardo Wadel, Albert Sagrera,
Fabián López, Pablo González)

Osmosis between the interior and the exterior promotes a hierarchical indeterminacy in the intermediate spaces between the street space and domestic space. Housing shapes the urban landscape because it is the negative of open space. We need to promote ample thresholds and relational spaces, spaces of negotiation for urban coexistence.

Having shared spaces forces us to negotiate the rules of coexistence, to reach agreements to take care of common spaces, as a group, for set periods of time. During the pandemic and the lockdown, we saw how communities organize for remote work, childcare, providing services like shopping for the elderly, etc.

It’s obvious that format plays a big role. With a dispersed city model, where people are more isolated, those dynamics that foster the social fabric are harder to come by.

MIM A (Mariona Benedito, Martí Sanz)

Knowledge of materials and construction systems, the study of their benefits, their behavior, their logic, their origins, their life cycles, the secondary resources required for their installation, and their cost determines the choice of one or the other when it comes to approaching and developing an architectural design. In the early stages of a design, different aspects such as the building's typology, the location, budget, etc. may suggest certain materials, structures, and construction systems. As the work progresses, we make estimates and carry out comparative studies on the advantages, disadvantages, strengths and weaknesses of one or the other and ultimately propose specific options. Whether we're working with a traditional system or a new one, we try to complete a dimensional analysis and divide the solutions into modules in order to optimize the system and reduce waste.

1. Technology Casanovas, Graus, Pérez arquitectes (Joan Casanovas, Ramon Graus, Ana Pérez)

A new architecture for the habitat could be developed in an ambiguous synergy with an enveloping nature. An architecture of new implants and new transplants, of smooth infiltrations and strange insertions.

It would no longer be a question of partitioning spaces or dividing up uses, but of arranging (integrating or articulating) "active parts" within a space that is merely "punctuated" or "pinched" by lightweight elements like pavilions, protrusions, or mats associated with uses, but also by "operative topographies/topologies". These devices would act by "occupying and preserving" at the same time. These programmatic devices would not be camouflaged, but implanted in the landscape; and the effectiveness of the architecture would not be rooted in the objective and figurative definition of the object, but in its ability to propose a new, abstract logos of movement and sliding.

5. Future-desire Manuel Gausa

Housing will be social and will foster the good life from the moment that it can materialize, in the best possible way, the intermediate elements that are understood as mediators between the design's different scales. In our case, living in a Mediterranean climate, we are talking about the dwelling's relationship with its outdoor spaces, with communal outdoor spaces, and with the successive situations in the transition toward urban public space.

In the field of housing, ecology comes into play first and foremost through urban planning that posits the city and its surroundings as an ecosystem. Aspects such as excellent living conditions, a mixture of activities, walking as a means of transportation, energy production, the minimization of consumption, and the reuse of waste can only be guaranteed from a perspective that encompasses the territorial scale. The centralization of building services and their organization to generate savings and a self-sufficient zero-energy performance breaks with the paradigm of late 19th-century modern cities. The subsoil of cities was outfitted to create *plug-in cities* that could connect to the integrated services of public networks. Now the opposite process has begun; disconnection is a reality that allows for energy self-sufficiency and near net zero consumption. Above all, it is essential for all the agents involved to come together in an attitude that is conducive to recycling, rebuilding, renovating, exchanging uses, and consolidating the urban fabric and the existing housing stock. The most sustainable buildings will be the ones that can admit the most changes in the future.

A space for absolute freedom. Total soundproofing (noise is the biggest problem in collective housing). Ample spaces that are not mono-functional, but usable in many different ways. Minimum distance between the apartment door and the street door. In fact, it would be ideal for every unit to have direct access to the street. Except in extreme cases: do away with air conditioning and elevators for access to first and second floors. Recolonize roof spaces, currently in the hands of telecommunications companies, as the only viable communal space, in terms of voluntary access. Guarantee a minimum of square meters per individual.

We are interested in designing with a more open support structure that maintains a certain independence with respect to the other constructive components of the dwelling. In addition to the obvious advantages in terms of programmatic flexibility, there is also the possibility of incorporating aspects related to budget, flexibility, and the speed of construction.

Modern thinking about housing is based on extremely archaic criteria: 19th-century hygienism and the Existenzminimum of the 20th century, data that quantified the minimum functional space and a health-based relationship with the exterior.

Ultimately, this gave rise to our building regulations (now overly complex) which led, initially, to the serial housing of the 1950s and 1960s.

As I see it, the pandemic has been an important collective experience for everyone. And housing, today, is something completely different from what inspired our current regulations (for example, the need for flexibility and change, openness, interaction, etc.). Remote work as a reality, as opposed to a fiction. Connection with the outdoors and the surrounding community. There is an urgent need to define new prototypes.

The history of architecture is full of great examples of habitation. In our opinion, before we start dreaming about whatever new thing housing should be, as architects we need to incorporate into our ways of living all the virtues we're already familiar with, and demand that those virtues shape the current stock of residential real estate. We believe the problem is that society and the profession today have lost track of how far we've come. And, instead, we are pretentiously trying to find new inputs to alleviate problems that have already been solved in myriad and wonderful ways.

Designing by rooms guarantees the possibility of inhabiting a space in very different ways over time. The problem is that the density of rooms required by most programs makes it necessary to reduce the room size to the minimum surface area stipulated in the regulations (10 m^2). We need to reconsider whether the good life can actually fit into 10 m^2.

We understand designing urban housing as a unique opportunity for city making. The relationship with public space occurs in the entrances and in the main collective spaces which, as we see it, should be understood as an extension of urban space. Likewise, we believe that efforts should be made to incorporate such collective spaces into all public housing developments, despite the management difficulties they may have caused in the past.

In the European context of population decline, only barely balanced out by the influx of immigration, there is an evident need to curb the expansion of cities and urbanized areas. The time has come for urban compaction, for a return to density combined with the implementation of plentiful, frequent and well-timed public transportation. At the same time, we need to guarantee the progressive substitution of a dispersed city model founded on private vehicles, while yielding a significant portion of the space currently occupied by cars to transportation that is human powered or electric, with a low dead weight ratio (personal mobility).

Interior: remote work during the pandemic has taught us that it isn't hard to create good conditions for reinhabiting the depopulated areas of inland Catalonia, reusing and recovering its urban structures.

Coastline: It is urgent for us not only to halt, but even to reverse, the model of dispersed urbanization on coastal land occupied by underused housing dedicated to the monoculture of tourism.

Given the push toward standardization, we will need to pursue singularity —an adaptation to each inhabitant and to each individual so that our living spaces can be unique and personal.

The administration's attempts at industrializing housing in order to save money or time have been unsuccessful. The most recent effort—design competitions including construction companies and manufacturers, intended to speed up the design and construction process, but with results that are still pending after more than a year and a half—has been a particular failure. In other words, there can be industrialization, of course, but there has to be industry: joint research involving universities and companies (like in the case of thesis projects in the Basque Country in partnership with Tecnalia) and more resources and training for experts in the administration.

The flexibility and versatility of a dwelling is not rooted so much in mobility or changeable spaces, but in offering an indefinite number of rooms of similar sizes that can provide families with a varied living space if they are interconnected efficiently. Homes today need to respond not only to the different uses required by a person, a family, or a group of friends over the course of their lives but throughout the course of their daily activities. Before the lockdown, we spent lots of hours away from home and our bedrooms were only for sleeping, for example. The lockdown broadened my perspective and expanded the uses for my children's new bedroom as well. Bedrooms shouldn't just be rooms we sleep in. They should be rooms where we play, read, work, etc., in addition to sleeping. That is why bedrooms should be big to allow them to accommodate different kinds of uses, and without differentiating between bedrooms intended for adults or for children. In fact, children and their toys take up a lot of space.

For economic reasons, developers (both public and private) have always had a natural tendency to maximize private spaces in individual units to the detriment of the collective spaces in their buildings. The poor quality of these shared spaces, reduced to a minimum, interferes with residents' interactions with their neighbors and with the city, whether they are on the ground floor, on the roof, or on intermediate floors. When there is a shift in the economic criteria, like in cooperative housing, the balance is evened out a little: common spaces take on more importance, supporting social connection within the building and synergies with the surrounding neighborhood and the city. By incorporating work spaces and leisure spaces, a residential block becomes part of the productive city, a kind of "pseudo-facility" for the neighborhood that mixes uses. An urban hybrid.

The quality of housing cannot ignore the quality of communal spaces and, most importantly, the spaces that relate to the city and the community understood in its broadest sense (society). The number of people who will be able to live in public housing will always, unfortunately, be small, but many of us will still be able to benefit from a well-thought-out, greener and more inclusive city; and public housing can contribute significantly to that.

In many cases, the different lifestyles of a society are not reflected in public housing developments. In a context where it is increasingly common for people to live alone, one-bedroom apartments are only a fraction of developments. We understand that there is a compelling reason for this change with respect to buildings from ten or fifteen years ago, and it is true that building smaller units results in a price increase per square meter because a series of fixed elements (kitchens, bathrooms) have to be attributed to less surface area. However, we believe that it could help younger users enter a more affordable market for renting or buying, become independent sooner, and lessen the financial burden on their families. Given the current housing emergency, couldn't the requirements be relaxed so we can have more housing instead of fewer, larger and emptier units?

Intermediate spaces are spaces of opportunity. In traditional village houses this was clear. People would take chairs out onto the street or they'd have a bench against the façade where they could meet with neighbors and pass the time: an easy way to socialize. Today, this is harder in the multi-family apartment buildings we tend to live in. If you want people to relate with one another, you have to create spaces so it can happen. If the relationship between the street and the building is just a door, if the entryway is small and there isn't any shared space, we will hardly ever cross paths with our neighbors or socialize with them. To avoid these vulnerabilities, administrations should prevent regulations from being overly strict, and there shouldn't be incentives for building a maximum number of units, but rather for providing quality in buildings and for their inhabitants: courtyards or access porches related to the streets, entrances to dwellings through relational spaces, communal uses on roofs, shared rooms that can be rented out or used for family meals, meetings with neighbors, play, etc.

The fabric of the compact city is largely made up of housing. Buildings have a responsibility to construct the spatial qualities and features of the street in a generous way: permeability, activity, safety—in short, urban comfort. Far from drawing a strict line between the public and the private spheres, the intermediate spaces between streets and dwellings provide the opportunity for a litany of communal spaces that can construct a place for socialization. We are referring to spaces that can activate the community and public space at the same time. Humanizing the city is an unresolved issue. The good life also depends on coexisting in harmony, on networks of neighbors and the responsibility of being part of a community. These are essential values in a contemporary society governed by the individuality of new digital systems, and they can only be developed if there are spaces that provide for the interaction between users, accepting conflict as one more, intrinsic element in the process of maturation and collective growth.

Elements of control affect both a building's plan and its section, and they emerge as intermediate spaces, as thresholds that take on intermediate conditions between the strictly exterior or interior spaces. It is precisely this ambiguity that we believe must be addressed decisively, first from a budgetary point of view, both in terms of execution and maintenance, and then from a regulatory perspective.

Rehabilitation is another huge field of action where sustainable strategies are taken as a given. Reusing existing constructions and minimizing demolition significantly reduces our impact on the environment. Public operators can exemplify this way of working to recover existing buildings, which are often located in more consolidated urban fabrics. Moreover, this can become an area for typological experimentation that takes advantage of aspects related to construction, structure, or scale that would not come up in the context of new buildings.

An architectural approach to social housing should aim to increase the degree of permanence. Like all social investments, social housing needs to be highly versatile in order to be open to future variations and modifications in terms of program and use. However, the architectural attributes we associate with comfort must be able to persist throughout the useful life of a building, which exceeds that of a single user.

Housing design, and architecture in general, needs to remain on the margins of circumstantial debates. The best strategy for sustainability is that of permanence. Good design has to offer pleasure; it must work in consonance with physical phenomena because they aren't circumstantial. That is how we can guarantee a design's durability and offset the ecological footprint of its construction. By collaborating with natural phenomena, we can guarantee buildings that won't "spoil". By creating reliable, pleasurable architecture that offers a solid performance we can guarantee its durability and the relevance of our profession to society.

The wide variety of technological and constructive demands should complement, not alter, the constants that, from the realm of architecture, have always served to define living in harmony with the environment.

The climate emergency and the social crisis have both shown that architectural interventions in the built environment (to improve it) or through new construction (to respond to social needs) need to incorporate integral quality. Many examples that have been designed, built and put into use, with positive results, demonstrate that this is viable in both public and private developments. As we wait for the political, economic, and regulatory changes to help us address the challenges society has defined (UN Sustainable Development Goals, EU Taxonomy of Sustainable Activities, etc.), we must take action.

1. Technology

Societat Orgànica
(Luca Volpi, Gerardo Wadel, Albert Sagrera,
Fabián López, Pablo González)

There are different approaches to achieving sustainable housing. It is possible to build practically airtight, mechanized houses with almost zero consumption but which are completely isolated from their surroundings and with an operation that is independent of their inhabitants. This paradoxical idea of ecology can be contrasted with one that is more permeable to the environment and dependent on its inhabitants. This interdependence of housing and inhabitants can bring about a more conscious and attentive, more ecological way of living. The first approach depends on a commodified and institutionalized ecology as a consumer product, with all the environmental certifications. It relies on technology and generates an inevitable split between architecture and ecology, between inside and outside. The second is an attempt at a return to origins while also rediscovering certain associated aesthetics that can help architecture move forward in all its dimensions. The most sustainable architecture is what remains unbuilt.

2. Ecology

Pau Vidal

On the one hand, the “architectural potential” will be determined on the basis of understanding the limits and opportunities offered by the biophysical framework in which the actions can be undertaken. Based on this consideration, the team designing the building is responsible for fully exploring the possibilities of making the most of the resources offered by the site and defining the optimal response to its limitations. On the other hand, the scope and effectiveness of the response will be determined by a rigorous study of the needs to be fulfilled (the planned program) and by an assessment of the efforts required to provide an adequate response in terms of the consumption of present and future resources. “No!” is always a valid answer, if the solution is excessive and unnecessary in architectural and material terms. The most sustainable building is one that is never built!

2. Ecology

Societat Orgànica
(Luca Volpi, Gerardo Wadel, Albert Sagrera,
Fabián López, Pablo González)

There are many architectural priorities that are meant to support the good life. We would like to focus on a recurring debate that is ongoing in our studio, which has to do with planning. From its conception, most planning for new residential areas today promotes a poor quality of life, or it is not flexible enough for those it affects to be able to maximize high-quality urban living. This may be a result of the current tendency toward hyper-specialization, where planners aren’t well versed in residential design and vice versa. Or it may be due to other reasons, but the initial ideas in the planning certainly ultimately enhance or restrict our ability to create environments that are conducive to the good life. And we may not be conscious enough of that today.

3. Habitation-the good life

AMOO (Aureli Mora, Omar Ornaque)

The quality of urban housing is directly proportional to the quality of the collective spaces nearby. In that sense, the architecture of any housing project not only needs to address the associated program but also to improve and enrich the space around it. Collective/communal spaces in residential buildings should be promoted and understood as urban regenerators, as focal points for the possible revitalization of neighborhoods. Supportive management on the part of the administration is key to making the most of the potential of these spaces. The architecture has to generate the possibility, but user involvement and help from the administration are necessary ingredients for success.

4. Socialize-urbanize SUMO arquitectes (Marc Camallonga, Jordi Pagès, Pasqual Bendicho)

Technological demands are an opportunity, since they make it necessary to the implicate/involve all construction agents in the design phase. Controlling the construction project by reviewing the construction drawings together with the different manufacturers working on the building allows for the best possible result in each case; and sometimes it allows for introducing technological innovations, which we believe should be a reinterpretation-adaptation of local traditional solutions that have been proven effective and that can be quantified and assessed using today's tools.

Working with an interdisciplinary team also allows for a thorough study of the possibilities of standardizing and simplifying solutions for the project you are designing. Ultimately, design and construction will need to be joined as a package in order to satisfy the growing need for security, conciseness, and innovation when it comes to construction and being able to offer the required features.

1. Technology Joaquim Ortega Arévalo

Technology is an ally when it comes to construction in the context of climate change. Construction implies large quantities of CO_2 emissions, which means that it is almost mandatory to design new buildings using renewable materials and energies in an effort to reduce those emissions. In that sense, aside from ensuring better control of materials at the point of manufacturing, the processes of prefabrication and dry construction significantly reduce construction times and minimize the noise and disruptions that may affect nearby residents during construction. It would be very positive to cut back on new construction and make a firm commitment to finding mechanisms for refurbishing existing buildings. Straightforward mechanisms should be found for interventions in existing buildings, by virtue of which the administration could allocate direct funding for improving basic living conditions. Indirectly, that would help to improve our cities.

The basic, standardized social housing program should be made more flexible in order to respond to varying demands. The requirement for flexibility in housing should be extended to the scale of urban planning to encourage programmatic innovation. Inter-scalar working processes should be introduced, midway between planning and social housing design, which can help to inform planning and, if necessary, revert it for the benefit of the quality of the housing. It is incredibly necessary to be able to understand and describe users' profiles more precisely so we can generate geometries and design strategies that are suited to the real needs of the inhabitants. Housing programs should include outdoor spaces for leisure, culture and gardening. Flexibility requires including sufficient storage spaces that are independent from the individual rooms but inside the dwelling.

1. By looking critically at the entire multi-scalar cycle, from planning, with its associated regulations (nearly always obsolete), including the architectural artifact (with its material and energetic demands), and through to the user as an active and responsible part of how the different systems operate.

2. Prioritizing passive systems over active ones, counting on the participation and intelligence of the user as an activator of the different systems. Opting for flexible, adaptable systems.

3. Taking into account a complete ecology as a support for different animal and plant species.

We are only interested in technology that sets up a strong connection with the architectural experience. Construction strategies that may be of interest in a design because of a specific contingency, like availability of materials, the reduction in the length of construction phases, the implementation, the management of waste, the intersection with the territory, the material contextualization in relation to the environment, etc. They are incorporated if, and only if, they predetermine the tectonics of the project and, therefore, the architecture.

Beginning our operations from the cubic meter, as opposed to the square meter, working with the volume of air and its quality.

The most credible flexibility has to occur in non-hierarchical areas that allow for multiple activities, variations in use, and relationships that can take place because the allocated volume is sufficient and not associated with a particular function. This strategy is useful for designing buildings for public rental, since the future users are not yet known, and the system has to be open enough to facilitate and accompany different modes of living.

It is worth developing the "dispersed and discontinuous housing" model. The housing program should be implemented first in section. Collective areas can be provided for temporary private uses: satellite rooms that can help expand surface areas temporarily to respond to specific needs in terms of work, socialization, or accommodation.

Architecture has "lost" its sense of responsibility for the design and construction of comfort in buildings and, therefore, for much of the experience in their interiors. Society, the profession and regulations have (sadly) accepted that comfort requires machines and that, from an environmental point of view, it can only be assessed in terms of efficiency.

We need to take back the construction of comfort and do so using the tools characteristic of architects: 1, designing the sustainable use of objects and not the objects themselves, the demand for energy ahead of the efficiency in production; and 2, designing the behavior of buildings using pre-fossil strategies: inertia as a system for maintaining interior temperatures, conditioning temperature and humidity using surfaces as a way to manage energy without losing it when exchanging air, cross ventilation and solutions that promote natural intake for the pretreatment of primary air in winter.

First, we need to assess the current state of the housing stock and make big investments in energy rehabilitation, which the European Union is requiring now. With regard to new housing projects, we feel it would be interesting to incorporate certain aspects of European systems (Passivhaus) while always making sure they are compatible with the Mediterranean climate. Promoting the passive systems that traditional architecture has always offered, and adding certain active systems that help achieve the desired comfort requirements.

Increasingly, collective housing is tending towards more abstract strategies that aim to de-hierarchize and de-adjectivize domestic spaces to give them more flexibility. With this shift, the contrast between rooms and traditional circulation areas tends to disappear, yet some of those spaces must necessarily be used for circulation, which precludes other uses. Where Louis I. Kahn differentiated between served spaces and servant spaces, here we should differentiate between “circulable” and “non-circulable” spaces. The comfort and flexibility of the dwelling will be generated through the adequate size of its spaces and the proper interaction of each room with the surrounding spaces. These connections between spaces, which break with the rigidity of more traditional formulas, are what let us talk about a “domestic landscape”. Obviously, we also associate comfort with more sensory aspects of architecture tied to the quality of the space, its shape, texture, light, temperature, acoustics, relations with the outside, privacy, etc.

Housing is a right, but also a shared commitment and responsibility. I hope that, in the future, tenants will be aware of the real value and cost of social housing and that, at the same time, they will feel truly supported by an effectual administration without all the highs and lows of political maneuvering. Within the stable framework of a firm commitment to public housing, I believe that the incorporation of shared spaces, managed by tenants, will strengthen and consolidate the democratic values of our society.

5. Future-desire

Emiliano López Matas (Emiliano López Mónica Rivera Arquitectos)

Build less, the minimum, recover unused buildings, condition existing ones, redistributing the housing stock. As long as sprawling garden cities and oversized single-family homes continue to exist, any response to the climate emergency from the standpoint of collective housing will be a patch that only polarizes the disparity between unregulated luxury housing and overcrowded housing.

2. Ecology

Ramon Faura

Generally speaking, regulations always lag behind the social and technological changes taking place in society. Industry also plays a key role in making it possible to respond to the challenges presented by the future and the climate emergency.

Cierto Estudio
(Marta Benedicto, Ivet Gasol, Carlota de Gispert,
Anna Llonch, Lucia Millet, Clara Vidal)

As we see it, a possible desirable future would be the possibility of working in urban environments that are of higher quality than the ones we are used to. The current problem facing architecture is urban planning. Contemporary urbanism is wholly disappointing, without exception. New urban expansion doesn't interest us. The urban planning regulations are too coercive, excessive, banal and standardized. With their rectangles drawn in plan, the regulations nullify any possibility of reimagining architectural and urban typologies. Trying to design buildings of interest will never be enough if the context in which we are working is entirely deficient. The only way to improve our cities is through quality urban planning.

dataAE (Claudi Aguiló, Albert Domingo)

Social housing should incorporate as many passive strategies as possible and avoid short-lived technologies that require periodic maintenance. A lot of thermal inertia, good cross ventilation, and proper execution that guarantees the durability of buildings without the need for maintenance.

2. Ecology Emiliano López Matas (Emiliano López Mónica Rivera Arquitectos)

We should make housing affordable for everyone, because that still isn't the case. One of the methods that might be interesting to encourage would be to facilitate, both administratively and legally and economically, processes of self-promotion involving groups of people with similar interests. It makes no sense that one of the most important investments we make in our lifetimes is defined only by a single agent (a developer) without the direct participation of the end user.

5. Future-desire Casanovas, Graus, Pérez arquitectes (Joan Casanovas, Ramon Graus, Ana Pérez)

These are times of change. The intense experience of living through a pandemic has abruptly precipitated changes that were already emerging in recent years: society's relationship with the environment, technology, mobility, our ways of working, where we work, the type of jobs we do, and what we consider work; in other words, the pandemic has changed our relationship with all the aspects that shape our living spaces.

It's impossible to predict the future. As designers we are used to working with changes that forge the path into the future, but always based on "the future of the present". The future we can foresee: the one that is shaped by our desires.

We need to ensure that housing becomes, once and for all, a fundamental right and not a consumer good. That is still a long way off.

We don’t know “what housing should be that it hasn’t yet become.” We do have interests and ongoing research that we try to put into practice when we can, and on the other hand, there are more intellectual or speculative issues that have a less obvious relation to the day-to-day operations in our studio. For example, the notion of discontinuous domesticity: housing as the sum of the landscapes we inhabit as we go about our routines (bedrooms, workspaces, bars and restaurants, university, cinemas and theaters, our usual routes, friends’ and families’ homes, etc.). A liquid habitability that leads us to imagine a flexible, temporary, diverse dwelling. One case that works in the opposite direction is the permeation of the public sphere into areas that were traditionally considered domestic. For example, shared apartments, where bedrooms become micro-havens of domesticity and the rest of the domestic sphere becomes a territory for negotiation and potential conflict—attributes characteristic of public space.

Typological innovation will be possible if building regulations are made more flexible and minimum surface areas are established that allow for flexible uses of rooms. We should ease the requirement of maximizing floor area ratios on plots intended for housing in order to make it easier to break up and dematerialize the building volume, while facilitating the inclusion of elements of habitability characteristic of the Mediterranean climate—intermediate spaces like balconies, terraces, and porches—which help to humanize the scale of the built environment. The flexibility of uses and the emergence of the coupling of home and work demand suitable spaces in dwellings or the incorporation of communal spaces to accommodate remote work.

Food sovereignty is one of the challenges when it comes to closing loops in the metabolic conception of the urban environment. The requirement of local production is not only applicable to material or energy resources; access to local food is key to reducing emissions associated with transportation and minimizing ecological footprints.

By emphasizing the reduction of demand through passive solutions in architecture and through contributions from the users themselves. Bioclimatic design and learning from its “management” let’s us achieve the desired comfort with hardly any consumption of resources, while also cushioning buildings against situations of environmental and social vulnerability (energy consumption, water, etc.) in the future.

I think certain recent historical myths are clearly inoperative. Urban density as a paradigm for the city, with the support of collective or private mobility; in other words, concentration related to a dispersion of travel.

In that sense, I think that the Paris proposal, “The 15-minute city”, has a future; that is, the residential settlement leaves behind the bedroom community model to become a close-set environment where services, work, and nature come together. There are new projects working in that direction in Europe.

Urban planning emerges as a more complex network where centers, peripheries, and nature all intersect.

In order to meet a future goal of decarbonization, we need to start implementing strategies and measures that work toward consuming as few resources as possible and generating as little waste as possible. The materials and construction solutions we use should be framed within the circular economy and closed loops in order to ensure a reasonable economic and environmental cost. It is true that savings often come not so much from the systems as from the indirect costs associated with the duration of construction and the dimensional precision made possible by pre-industrialized processes. What we're talking about is a long-term saving, a global responsibility.

We need to launch a debate, which has already been resolved in other European countries, about the level of finishes. How could the administration help raise social awareness of customizable housing? Homes where the structure, the envelope, and the building services are complete, but furnishings and flooring, at least in kitchens and bathrooms, are left out.

Our fundamental premise when we approach a design is to avoid a preconceived idea of the spaces. We are interested in "de-hierarchizing" the spaces that make up a dwelling in order to promote new ways of living in it. Integrating different components, such as structure, envelope, and partitions to obtain an essential support structure that, paradoxically, allows for a maximum versatility of the space.

The climate emergency has shown that we need to rationalize our use of available resources. And the kinds of habitats we build are an important part of that process. Building our habitat should first be based on a reinterpretation of existing constructions: refurbishing the existing housing stock based on a vision that will strengthen the relationship between the architecture, its environment, and the surrounding climate. Second, new construction should be oriented towards the essentials, and it should always draw on a strategy that will offer resilience over time: providing the architecture with the possibility of becoming new spaces in the future.

3. Habitation-the good life

Societat Orgànica
(Luca Volpi, Gerardo Wadel, Albert Sagrera,
Fabián López, Pablo González)

The use of technology and prefabrication entails and forces housing blocks into standardization, repetition, and homogenization. Those are positive aspects when it comes to materials and construction, but they are more questionable in terms of implementation on site, the definition of the landscape, the adaptation to and the relationship with the environment. And they are equally questionable for their effects on homogenizing lifestyles, the spaces that are created, the characteristics of the spaces we live in. In that sense, it is clear that construction systems need to advance in parallel with technological advances. But the work of architects should focus on using these egalitarian and standardizing tools in a unique and singular way for each condition, whether it is a condition of the environment or of the dwelling itself, to ensure that the uniformity is “tailored” to each condition. Otherwise, the value of the architecture is lost, since each place, each person, requires a unique solution.

1. Technology

Meritxell Inaraja

The main strategy to accommodate the various technological and constructive requirements in a design relies on combining and relating the best industrialized systems for each item or element to be executed. Industrialization, associated with prefabrication, offers many improvements in terms of control, speed, and quality in the execution of collective housing. However, it is not advisable for the definition of a design to depend on a single company or system, since in most cases that ends up imposing conditions and restrictions that don't benefit the design. The reduction in execution times and in the generation of waste creates savings in terms of indirect expenses, but the main unresolved issue is for the application of industrialized systems to offer an actual reduction in the price of execution. 3D printing offers new possibilities and changes the rules; industrialization and prefabrication will no longer be associated with repetition.

Some studies indicate that, in the future, we will work fewer hours. There are already ongoing debates about cutting down the work week to four days or establishing a universal minimum income. And when we do work, more often we will be doing it from home, in hyper-connected dwellings that allow for a better work-life balance and cut back on travel. Given a hypothetical useful life of 100 years for any new building, we can't continue designing housing without accounting for this increasingly immediate future. We will be spending more time at home, and therefore our homes will need to be more flexible. In terms of collective housing, the ground floors of buildings have the potential to become co-working spaces or workshops. Roofs and other communal spaces can be transformed into recreational green spaces, with the introduction of vegetable gardens that would allow residents to grow their own food. We imagine hybrid, self-sufficient communal buildings, where home, work, city, and countryside all overlap.

Today, our aim is to understand the approach to inhabited space not just from a more responsible critical-regenerative perspective or ethical foundation, but from a broader conception, more closely related to the idea of a habitat —in other words, to quality of life and to the suggestive fantasy of pleasure, the enjoyment of personal projection and well-being derived from a qualitative interaction with the environment, rather than the usual austerity of a space that is envisioned only as a mere social need. This new housing would be sensitive to the increasing flows of exchange between communities, programs, and activities related to work, communication, knowledge and even—why not?—leisure and tourism; conceived, ultimately, from the perspective of an interconnected diversity and individuality rather than a uniform/uniformized homogeneity and collectivity. Today the idea is to transition from dignity in living to pleasure in living... and living together.

The revolution currently underway reveals the transition from an eminently "ambient" action on the part of architecture—a transformative (*positivist*) intervention in the surroundings—toward a decidedly "environmental" action—a mediating (*positivizing*) relationship in/with/from/by and for the surroundings; a relationship that is supported by the processing (reactive and reactivating) condition of architectural space: in an optimization of information (the data and demands from the environment) as an essentially (re)qualifying qualitative response.

The exploration of these dynamics has driven ongoing processes, present in a whole generation of ideas committed to this change of paradigms that has overcome the classical, modern, and postmodern conceptions, directing them instead towards a new, more advanced informational logic.

Social housing should be the site of shared knowledge. Based on new housing policies, new uses, new technologies, old emergencies, new environmental paradigms, etc. Allocating more resources to the administrations that work to develop social housing. If it takes longer to award the competition for an industrialized housing project than it does to build it, there is something wrong. Too many projects get held up by administrative or bureaucratic problems, either because of hasty proposals or poor coordination between administrations. There is a lack of public land and resources for housing, but there is also a lack of personnel in the public administration to manage the large volume of housing projects that are underway or that are still needed. From urban planning and the proper organization of public tenders through to the supervision of designs and construction and the subsequent management of buildings, it's a huge human undertaking that requires a lot of attention and care to make it work.

"Habitation or the good life" is a concept with a potential to foster reflection and high-impact transformations if we explore its collective and urban dimension; in other words, the goal is to transcend the individual unit in order to find the balance, where living well definitively becomes a right for everyone. I believe we'll truly be able to talk about "good living" when we invest efforts in guaranteeing more energetically and economically sustainable housing, as well as a larger amounts of excellent public space in our cities.

Retrieving some of the key ideas that originated with the post-war generation of architects in Europe, we think that design should start with a clearly contextual methodological approach, oriented towards association.

We interpret the residential project as a larger structure, set up so that its users can optimize it and transform it according to their needs, while at the same time deriving qualitative relationships with the urban environment.

Residential spaces that give users the possibility of being alone, but at the same time the chance to socialize; supporting the coexistence between residential units with strategically arranged common spaces, such as shared access walkways, gardens, communal roof areas, laundry facilities, or small libraries.

The technological demands of housing are, in fact, easy to fulfill. First, we have to recognize that the most basic and longstanding traditional techniques can still satisfy the problem of building and stacking enclosures that can be inhabited comfortably. Once the basic problem of habitability is taken care of, digitization makes complex forms and processes technologically feasible, which would be difficult to realize in any other way, and which can undoubtedly increase the speed and accuracy of construction while lowering the costs. Those processes don't always improve the end result, however, because, in practice, digitization separates the act of designing from a direct experience of the surrounding conditions. Just like the web can turn us into snipers on our rooftops, we must be aware that in any digital process, the distance between the interface and reality can make us into designers who are less engaged and feel less responsibility for our actions.

Whereas at the beginning of the paradigm shift in how we think about ecology the solutions that responded to problems of sustainability stood out as a differentiating factor, today it is very likely that the increasing energy-related requirements will tend to standardize constructive solutions, which will be applied across the board. Demanding that a building be sustainable will be like demanding that it remain standing: given by default. As a result, the most interesting architecture will reach beyond mere compliance with regulations and use the building's energy performance as a motor for the design strategy.

The urban planning for residential areas largely determines the sustainability and energy efficiency of housing. Concepts such as accessibility, floor area ratios, density, green areas, orientation, daylight, and ventilation are defined in the planning. Then, there is a margin for improvement in the building design: the optimization and sustainability of materials and construction systems, passive measures for energy efficiency, water recycling, the inclusion of greenery in outdoor spaces and on roofs and façades, generating green energy to power building services. The implementation of simple and affordable passive measures for collective housing requires active users who are aware that proper use is as important as how the elements are designed. A certain amount of outreach and education may be necessary in that regard, given that we have become accustomed to being passive users of active measures.

1. Opting for the hybridization of uses. Moving away from monofunctional housing stock.

2. Collectivizing as many uses as possible. Incorporating unprogrammed collective areas.

3. Including unprogrammed private areas (inside residences) as an articulation between the public and private spheres.

Social housing as an open structure, as an infrastructure that can accommodate multiple modes of living, in the present and as time goes by. Spaces at the edges of design and programmatic determination. Free ambiguous spaces that can be individualized. Spaces where the inhabitants can see themselves reflected. Imperfect spaces that accept their dependence on all kinds of contingencies, uncertain spaces that can give rise to unexpected uses. Indoor spaces, in-between spaces, and outdoor spaces. Intimate and collective spaces. Natural and artificial spaces. Spaces that generate climates and situations. Focusing our attention and efforts on articulating these different types of spaces, working especially on the boundaries between them. Healthy and permeable spaces that interact with the environment and the inhabitants. Spaces where plants can grow happily, pets can find their sunny spots, and objects can be organized and de-organized. Social housing needs more square meters.

Architectural strategies: optimizing and rationalizing the available resources. The hybridization of materials and systems with the goal of optimizing their performance. Flexible, adaptable solutions with the ability to evolve. Proposals open to continuing improvement.

1. Technology SUMO arquitectes (Marc Camallonga, Jordi Pagès, Pasqual Bendicho)

Speculation and the price of land play an important role in this question. The kind of residential architecture that best promotes social interaction is spacious and offers areas for interaction, whether with the city or in its interior. Cities are full of those moments of generosity, where points of interaction are created: under a porch, by a façade that is set back, or by a bench next to the entrance to a residential building. Without this generosity on the part of developers and architects, the socialization fostered by a building wouldn't exist.

4. Socialize-urbanize AMOO (Aureli Mora, Omar Ornaque)

The idea that collective housing is a mirror of society seems to assume that society changes before our housing does, and that our living spaces react to those changes subsequently. That does happen in some cases, like with the inclusion of working spaces in our homes, which has seen a forced acceleration with the COVID-19 crisis; but not in more structural cases, such as the typological shift towards de-hierarchized spaces. Is this really a change that reflects lifestyles, or is it a proposal originating from the administration? And if so, how have the benefits of living in de-hierarchized spaces been tested? Public institutions could carry out at least one study to corroborate this, to find out for sure whether people want to live in multifunctional square spaces with no hallways even if it means passing through the dining room after a shower or having their bedroom doors open directly onto living rooms, or accessing their kitchens from common areas.

5. Future-desire fàbric (Pau Casanova, Pedro García, Alain González, Javier Hernani, Toni Ferrari)

The idea of a “site plan” needs to be updated; its goal should be to situate the building in its context and relate it to nearby uses and agents, offering information about possible alliances and collaborations. It is an opportunity to reactivate the street level, where the community offers spaces for exchange or production.

Unfortunately, too often the land allocated for public collective housing is situated in “non-places”, where the city simply does not exist. The first strategic and effective decision involves knowing where to situate public housing to activate the neighborhood. From that perspective, the option of rehabilitation can guarantee connection in contexts that are normally more consolidated and, therefore, complex.

4. Socialize-urbanize llindarquitectura (Caterina Figuerola, Ibon Bilbao)

Housing, understood as a domestic infrastructure, sets the guidelines for adaptability to different ways of living in the city, both today and in the future. We're talking about an essential organizational structure that is clear and non-specialized. The elements are categorized by their spatial qualities and volume, by the number of doors and the multiple relationships between them; by their visual depth, natural lighting and orientation; by the quality of their interior, intermediate or exterior spaces; or by the basic pre-installation of building services. The structure can be improved and domesticated by each individual inhabitant, and it should be possible to enlarge or reduce the size of the minimum unit. This entails understanding the dwelling as a system, which allows for the use of adjacent spaces, or understanding the residence as a discontinuous entity within a larger building. At the same time, basic needs are supported by the incorporation of spaces for common uses that encourage socialization.

3. Habitation-the good life unparelld'arquitectes (Eduard Callís, Guillem Moliner)

The housing emergency demands a quick, efficient, and large-scale response from institutions; and peripheral land reserves are the most viable option in terms of costs and calendars. It would be wise to recall, however, that a similar impulse gave rise to the peripheral residential estates of the 1950s and 60s, which have been so difficult to integrate into city centers. We believe that public housing should be included in urban regeneration processes, and new construction associated with the consumption of undeveloped land should be the last resort. Following on this consideration, we are very interested in the question of intermediate space, in collective housing projects as well, as a mechanism for transitioning between scales, climate conditions, degrees of privacy, etc. Again, there is a relevant criticism here of the disinclination of most developers in this regard, since they are more concerned with maintaining their already narrow profit margins, which make it hard to integrate such solutions.

4. Socialize-urbanize estudi08014 (Adrià Guardiet Llotge, Sandra Torres Molina)

The parameters of health and comfort are becoming increasingly important in housing. Going back to traditional materials, avoiding volatile components, introducing spaces in between interior and exterior, insulating for sound, using materials produced locally, etc.—there are many parameters that have an impact, but everything depends on the resources we have at hand: wood is great, but we don't have enough local production for projects larger than a single-family home, ceramic production is on the brink of collapse, traditional trades are disappearing.

2. Ecology

Coll Leclerc (Jaume Coll, Judith Leclerc)

Technology is a fundamental part of design—understood not as a tool for the materialization of architectural concepts, but as another ingredient that contributes, from the outset, to its formal and conceptual definition. In that sense, aspects that are characteristic of housing design—modulation or serialization, for example—involve implicit construction processes that tend towards prefabrication. But the socio-economic conditions (very tight budgets) and technological conditions of the environment (the lack of an industrial tradition or the lack of locally produced materials) often force us to come up with alternatives suited to that reality. The example of the Xipre apartments, built by Antoni Bonet on Cap de Salou in the 1960s, is very illustrative. He uses a 28 × 14 cm traditional Catalan tile as a scale reference for all the blueprints and to introduce a modular logic into the different spaces in the complex. The design belongs to the world of prefabrication, and the execution to the world of tradition, and the result is extraordinary. It would have been impossible the other way around.

1. Technology

roel sánchez arquitectura (Pablo Roel, Eva Sánchez)

Technology should never be a requirement; it should always be a useful addition. We should also remember that the problems generated by technology aren't really the result of technology, but of the commodification of housing and construction fueled by speculation. In short, the problems are created by, and contingent on, looking at technology in purely commercial terms instead of as a response to the needs of housing itself.

1. Technology Ramon Faura

The way architecture has been associated with habitability in recent years, understanding it as a purely normative framework, should be called into question; that approach has led to standardized, entirely conventional and biased typological solutions.

An excess of functionality interferes with the freedom to use the spaces in a dwelling in different ways. We need exceptional spaces, highly qualified by their architectural attributes, which appeal to people's experience, as opposed to specialized spaces that only admit one function. Spaces that, both in terms of geometry and comfort, allow for more than one use, produce more than one climate, favor an emotional relationship between people, architecture and climate.

3. Habitation-the good life Harquitectes (David Lorente, Xavier Ros, Josep Ricart, Roger Tudó)

Ecology has more to do with an attitude than with complex devices and measurements that the people living in a dwelling can't understand. I admire vernacular architecture for its simplicity and precisely for the relationship it forges with the environment around it. It had to be ecological and sustainable, but without pretentions in that regard and without needing any particular label. Its low budgets and its perspective, which may seem limiting at first, help fuel ingenuity. In smaller projects it is much easier to adopt that kind of attitude, where you have to work out how to reuse the materials at hand, how to close the material loop and pay attention to what is offered by the surroundings. It's always easier to put into practice on your own, with a private client or in a small-scale construction. But bringing that same attitude into the administration, which is responsible for building public housing developments, would be a very positive step. To make that possible there has to be a shift in perspective, and no doubt changes to constricting regulations, always with an eye to ensuring people's wellbeing.

The key aspect of this question is how construction relates to the new ecological-sustainability paradigm. And, from my point of view, how that new paradigm is supported by scientific, technical, and cultural arguments, as opposed to ideological and political ones.

As I see it, the rhetoric of prefabrication is a thing of the past. Ours is a period of industrialized craftmanship; we've moved beyond the post-war era when residential blocks were being built to get people out of informal housing. The economy is always an issue, but in our profession it is an aspect that requires complicity from all parties involved.

We believe that every architect's desire to incorporate and respond to all the demands and possibilities inherent in the design process, no matter how contradictory they may be, is not a specific to housing design. Our response to this possible intersection of interests is founded on a strategic austerity in the resources that are used to qualify the architectural experience.

Two strategies. 1, design so that the basic elements of the construction can "behave" in many different ways—beyond the fundamental requirements of support and protection—in order to forge the user's overall experience essentially from the structure and the envelope; and 2, ensure that the behavior of the constructive solutions is derived from their material and geometric "nature" to achieve a natural behavior that cannot be "spoiled".

Resources can be better optimized in collective housing than in single-family or detached housing. Reducing energy consumption in all housing-related processes is crucial. The best way to reduce energy consumption is to avoid needing it. Taking advantage of the characteristics of the site, an envelope that performs well, the use of passive strategies, and involving users can drastically reduce the energy consumption of homes and buildings in general. Using building materials with a low carbon footprint and that can be easily reused or recycled. Responsible deconstruction should be as important, if not more important, than construction. Collective housing is a type of construction that can easily incorporate renewable production infrastructures such as solar panels, windmills, etc.; they only need to be incorporated into the design. Producing energy at the point of consumption saves resources and reduces the environmental impact.

We need to break with the traditional hierarchy of 20th-century housing. We opt to offer spaces or rooms with enough surface area so the user can choose how to use them. This flexibility would provide the good life demanded by today's society, adapting to the different lifestyles that are not contemplated by the traditional framework.

3. Habitation-the good life

Cierto Estudio
(Marta Benedicto, Ivet Gasol, Carlota de Gispert, Anna Llonch, Lucia Millet, Clara Vidal)

The radical architects of the mid and late 1960s anticipated that information and climate control would be the two key factors in defining architecture. In parallel with the initial stages of post-Fordist restructuring, the current predominance of virtual networks over physical structures and the importance of managing energy-related aspects are becoming key strategies in architectural design. We are interested in minimizing the material intensity of buildings and avoiding the hasty implementation of technological devices that orchestrate an artificial energy balance. Reducing the design requirements to the essentials; incorporating thermodynamic processes that promote energy savings.

2. Ecology

Xavier Vancells

Flexible distributions, the disappearance of specific room types required by protocol (vestibules, for example), larger minimum sizes than are currently stipulated, direct ventilation and natural lighting. As far as possible, direct entrances from the street. Housing should open onto public space instead of enclosed courtyards. Ensuring the quality of public space from the dwelling outward, instead of neglecting it by creating communities that are closed in on themselves. Promoting the use of non-ornamental balconies that can actually be inhabited.

A driver of change in the model of coexistence, a testing ground for constructive innovation, a paradigm for the rational management of energy, an example of a flexible and changeable element that, as a result, can persist over time.

The main strategy for successfully responding to the largest number of requirements is clarity and simplicity in the design.

Beyond individual experience, an intersubjective phenomenology of spatial practices, which takes into account the experience of living in relation to and in solidarity with others, is possible. It does not negate the right to individuality (we all crave moments of privacy, of coming home), but it reveals that our personal experience is part of a process of community socialization that interrelates us all, and that includes non-human beings. This opening, aimed at crossing through every layer of the material world, might begin with something as simple as erasing or, more precisely, thinning out the boundaries between territories that we have traditionally circumscribed in order to control them. The intersubjective occupation of space implies that we must be able to distort those boundaries and dilute them through a physical and cultural understanding of the threshold as a territory for exchange between open material realities.

Very often, collective housing is more focused on how it is represented and presented outwardly (to the city) than on the conditions it offers its inhabitants to live in it and interpret it freely with all the inherent potential offered by each site and climate (context).

Social housing forges a community around it. It functions simultaneously on different scales (city, community, and dwelling) organizing all those spatial conditions to accommodate the needs and desires of a given group of people. Those shared spaces are comparable to spaces in the home, as well as spaces in the city. They are spaces with multiple uses, open spaces, shifting spaces, meeting spaces, spaces for consensus and dissent, spaces for conflict and pleasure. Spaces you identify with and that identify you. We believe that social housing should be addressed fundamentally through collective spaces, highlighting all their capabilities. Drawing on reflections by Iñaki Ábalos, in a hyperconnected society that tends toward isolation, social housing could become a physical body where we can exercise our solidarity but also our autonomy, a space of respect where both communion and solitude are possible.

We should promote an abundance of solutions rather than demands, accepting the premise that has become increasingly obvious in public housing competitions: wood is the material of our times. It is worth noting that an excess in demand for this material has undeniable and immediate drawbacks, and that the constant rise in prices to which it is subject may end up making its use in public developments unfeasible. From the point of view of sustainability and the environment, wood is the material with the best qualities, but public proceedings that promote its use should do so with few “inventions” in how the briefs are formalized and ensuring that new alternative technologies will also be compatible. We believe that in the coming years we should be prepared for new industrialized solutions that won’t make us dependent exclusively on the availability of wood, a market that is limited, for better or for worse.

1. Technology fàbric (Pau Casanova, Pedro García, Alain González, Javier Hernani, Toni Ferrari)

There has always been a very conservative conception of housing, deeply rooted in tradition or what we’re already familiar with or what we have always experienced. That isn’t the case with technology, where we accept that the newest version will always be better than the previous one. Additionally, collective housing entails large economic investments and is therefore subject to risk and speculation. Both factors, added to a certain lack of trust, are incompatible with innovation. The push to transform collective housing has to come from the public administration, first to facilitate access to housing for people of all ages and social classes and, second, to respond to the new demands of contemporary society with bold proposals. In short, accessible, hybrid, diverse and democratic housing.

5. Future-desire roel sánchez arquitectura (Pablo Roel, Eva Sánchez)

Conserving energy is a priority. Implementing passive measures that ensure comfort while minimizing energy consumption is key. The implementation of clean energy collection systems should be non-negotiable, and they need to be clearly oriented toward promoting self-consumption, along with the decentralization of energy production points, in order to reduce energy dependence. The higher initial investment costs would be offset by a global vision spanning the entire life cycle of each intervention. Promoting local resources such as biomass and wood production as one of the fundamental elements. Promoting the ecological transition of local industries to improve on conventional construction systems. Using materials with little or no ecological footprint, setting the pace for the industrial production system, which should be adapted to this standard.

As a concept, there is something unnatural about collective housing. We call it “collective” because it consists of a series of housing units, each of which is occupied, however, by an almost unimaginable variety of different ways of life. One essential question is how we can design a space where everyone feels that they can individualize it and personalize it, in addition to adapting it to changing needs... Flexibility is essential. When we walk through the front door, the dwelling becomes joins that whole and forms the collective unit. The shared spaces need to have the same characteristics as the private spaces, allowing for interactions between inhabitants.

We are beings with lives, and we interact with living beings. As designers, we have to make sure that our buildings are alive.

It is very difficult to bring architecture into collective housing projects. Every little decision counts. The sum of them is what will give rise to the architecture. We need to take advantage of the fact that sustainability is increasingly well understood in society.

We understand housing as a domestic infrastructure: a support that provides structure in every sense, which can be occupied and improved, and admits changes in use over time. The choice of technology involves a constructive rationalization intended to save on means, resources, time and money. At the same time, in response to its infrastructural role, the intrinsic construction patterns that will shape the housing on a spatial, organizational, and modular level are explored. This involves a cross-disciplinary working team and a design process that takes the form of a spiral. Flexibilization as an isotropic structural system guarantees an open framework that can be colonized by different typologies of occupation. At the same time, the rationalization of the building services, their accessibility, and the anticipation of new networks will make it possible to upgrade the building in the future. The house is the support for the complete development of its users' lives, a domestic and working space: a utilitarian machine versus a space of identity and comfort.

The Grand Parc Bordeaux building by Lacaton & Vassal opts for renovation over new construction, the economy of resources (and therefore economic savings), and energy efficiency. It is important to emphasize that the design enlarges the surface area of all the existing homes by between 20% and 45% by providing them with a semi-outdoor space, free from a predetermined use, that can be colonized by its inhabitants in many different ways.

The renovation provides the inhabitants with much more space and environmental comfort than the minimums required by the building regulations and, in doing so, it improves their quality of life. In this design, everyone wins: the inhabitants, the developers, the city, the planet. Recycling, thinking about durability and flexibility, is also sustainability. But we don't just need good ideas; we also need courageous developers and flexible public administrations interested in adopting new high-quality architectural typologies that foster the well-being of their inhabitants.

Social housing is currently being designed following parameters such as flexibility and versatility. Finally we have realized that not all homes are inhabited by a two-parent family with children; there are thousands of potential users with their own particular lifestyles. If we want the spaces in our homes to be flexible, we need them to be big enough to accommodate a wide variety of uses. The pandemic has shown us that a living room or a bedroom may also need to be an office, a playroom, or a home gym. The housing regulations don't require each dwelling to have an outdoor space large enough that it could be considered another room in the house. It is essential that we guarantee the fundamental right to be outdoors and breathe fresh air, while allowing those spaces to be large enough to be used as a makeshift dining room. Housing regulations should also be stricter on issues such as proper orientation or natural cross ventilation.

Architecture should be conceived in a direct relationship with its surroundings; it shouldn't be understood as a series of systems that are isolated from the environment. It should be conceived as thermodynamically open systems, in a constant exchange of matter, energy and information with the natural environment. The aim is to design architecture with the ability to respond to pressure from the environment in an open, adaptable, interactive, changing, and controlled way.

Public housing should be dissociated from market standards. For us, the first priority in providing quality housing would be to increase the net interior area of the units. The second priority would be to provide the dwellings with more intermediate spaces: transition spaces, bioclimatic spaces, unprogrammed spaces, spaces for relating, atriums, terraces and/or galleries, etc.—above all, spaces of environmental comfort that add depth, ambiguity and complexity to the architecture. The third priority would be to define a basic dwelling, that can be personalized, is easy to customize, without finishes, and, therefore, much more affordable.

Based on sustainability that is derived from interpreting habitability in the most passive way possible, and based on an architecture that, along those lines, encourages a certain change in habits on the part of society.

Technology is presented today as one of the main allies in promoting a possible shift in the field of construction. Along those lines, while it is true that real estate developments, public programs, commercial typologies, and domestic spaces still tend to rely on neo-analog and late-modern architectures, based on “guaranteed” standards, it seems clear that with the new advances in smart industrialization, digital manufacturing, microrobotics for construction, material and environmental sensorization, etc., soon enough the assimilation of a new, more experimental and innovative operative logic (uninhibited by any a priori and/or retro-esthetic predetermination) will be the natural evolution of the technological, cultural, and formal development that is currently underway.

The new guidelines for collective housing incorporated concepts such as versatility, adaptability, comfort, or simply the “good life” for users. But the latter often remain users—rather than inhabitants—of an economic and political program that remains quite deterministic, resulting in buildings that, on the whole, are largely standardized and rigid. Active inhabitants are those who habitually engage in their own practice of space, who more or less literally construct it and turn it into a subjective phenomenon—a pleasant experience—which has a unique substance. It would be a mistake, however, to place value only on the qualities of this individual phenomenological experience without considering its implications for our life in community. In the current context of a hyper-networked society characterized by neoliberal dynamics rooted in flexibility and mobility (without control), we need to be aware of the new control mechanisms that may become commonplace in our homes.

Our homes should be designed following two very clear premises: design for nature and design for people. Nature is the answer for everything; our designs must respect it by using natural and sustainable materials, and by way of architectural proposals that aim for zero energy consumption in our dwellings. We want productive residential buildings that produce nature through green roofs and vegetable gardens, that generate enough energy for their inhabitants' consumption, and that avoid generating waste, reusing gray water, black water and rainwater. But we also want housing designed for people, where their needs come before all else and serve as the foundation for the design from the beginning. Homes that are not just places to sleep but that help reinforce social relationships and the feeling of being part of a community.

Given the existing stock of utilitarian housing with spaces that respond to standardized dimensions and materials, and in keeping with deterministic and homogenized choreographies of the practices of habitation and the short-term hegemony of profit, which has resulted (through the law of horizontal property division, for example) in a fragmented territory of property to the delight of the bulimic real estate bubble; and where the construction of the built environment is focused on the performance and control of the object-building—as an isolated element—that it is producing, we propose: to open ourselves up to the intersubjective reality of the inexhaustible interrelationships (physical, political, aesthetic, ecological) that we produce and experience in the immense variety of (human and non-human) material contexts.

The practice of this hope-infused material environment entails leaving behind seeing buildings as isolated elements that are produced in a unitary, utilitarian way with an expiration date (when they have provided enough profit) and instead recognizing this environment as a territory of overlap between physical, temporal, and cultural layers.

The quintessential democratic and egalitarian urban space of socialization, conflict and covenant is the public square and the street, where different social classes, ages, and ideologies have traditionally come together. Today, public space is threatened by a shift in the setting for social relationships onto social media sites that tend to fragment society into hermetic compartments, weeding out difference, and reflecting back similarities. Against all intuition, and to encourage opportunities for encounters among a variety of inhabitants, public space in the city should tend toward being scarce but accessible. When it comes to social articulation, a city with a lot of public space and limited communal space, like Rotterdam, is less successful than a city with relatively little public space and a lot of communal space, like the parts of Amsterdam corresponding to the Berlage Plan.

Encouraging shared uses should be a value and a program requirement. Generating large spaces for relating, which are not accounted for in housing programs, would encourage socialization. Sharing is a function that requires user involvement, collective culture, care, and respect for common spaces. Incorporating the figure of communities “carers” would support the adequate use of collective spaces and socialization and goodwill between members of the community.

Managing housing communities where there are spaces for shared use, communal spaces for relating, may require more attention. People must be willing to undertake the task and attend to it, if need be with the implication of professionals from other disciplines. We need to cut back our demands concerning the relationship between built floor area and surface area for sale or rent in order to increase the surface area for communal use, which current programs do not permit.

As architects we have a commitment to recover the sustainable aspects of housing at its origins, and to incorporate new advances to move towards a residential architecture that will be nearer to what is natural in the broadest sense, which meshes with the tendency toward renaturalizing our urban spaces.

Part of the sustainability associated with housing is closely tied to technology and building services. Another part, truly architectural in nature, has to do with the intelligent use of the conditions of the location, orientation, insulation, thermal inertia, and resources for passive solar energy capture. That aspect is always implicit in the common sense that forms part of any good architectural design.

Architects need to ensure that the elements that offer sustainability, such as courtyards, transition spaces, natural materials with circular life cycles, greenery, sun protection, etc., are an essential part of their residential architecture.

One of the less traditional materials in our country is wood, a natural and sustainable material that permits high levels of industrialization. To make this material competitive in economic terms, we need to improve the management of our forests so we can guarantee local production. While common sense tells us that industrialized construction should be cheaper than traditional methods, the truth is that is not the case. Construction companies in this country don't know enough about this type of construction, and because they're afraid of the unknown, they hike up the prices. On the other hand, knowing the number of people living in an apartment at any given time or collecting data on the users' demands would provide us with information about their habits that would make it possible to design more efficient building services systems.

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