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ESPAÑOLA



**SPAINLAB**  
**Spanish Pavilion**

13th International Architecture  
Exhibition  
La Biennale di Venezia, 2012

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**Curators**

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Débora Mesa  
[Ensamble studio]

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IE School of Architecture & Design  
M.I.T., Massachusetts Institute of  
Technology SA+P Department of  
Architecture

**Teams**

Ecosistema Urbano: José Luis  
Vallejo & Belinda Tato

Vicente Guallart: Chief  
Architect, Barcelona City Council

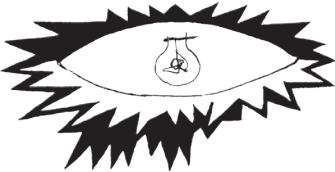
Menis Arquitectos: Fernando Menis

RCR Arquitectes: Ramón Vilalta,  
Carme Pigem & Rafael Aranda

Enric Ruiz Geli / Cloud 9

Sancho Madrideojos Architectural  
Office: Juan Carlos Sancho &  
Soledad Madrideojos

selgascano: José Selgas &  
Lucía Cano







## Manifesto

We work on a common ground but defending our own personal world is something we cannot avoid doing.

We are individual, not individualistic; but know how to insert ourselves in a bigger collectivity.

We innovate from tradition; our history and our culture is an always-fertile land, we do not ignore this.

We are adventurers; we have solid roots but are ready to conquer unknown territories.

We are not mere designers, we are builders; we develop theory but express better through practice.

We design the process to guarantee a successful result. The other way round is much harder.

We are proud of our work, we actually love it, and we feel responsible for every phase of it.

We are prepared to confront big challenges; we understand Architecture is many times a risky business.

We must innovate; our compromise as architects is to make things better. And so...

Our office is a productive lab, where we continuously research and work hard to materialize our ideas, where the spatial experience at the service of people is the ultimate goal.

Welcome to SPAINLAB





## SPAINLAB

### Spanish Pavilion

13th International Architecture  
Exhibition

La Biennale di Venezia, 2012

### CURATORS

Antón García-Abril & Débora Mesa  
[Ensamble studio]

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### Editors

Inma E. Maluenda & Enrique Encabo  
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### Authors

Enrique Encabo, Inma E. Maluenda,  
Antón García-Abril, Vicente Guallart,  
Débora Mesa, Fernando Menis,  
Javier Navarro, Hans Ulrich Obrist,  
Enric Ruiz Geli / Cloud 9, José  
Selgas & Lucía Cano with Josep  
Selga, Belinda Tato & José Luis  
Vallejo, Nader Tehrani, Ramón Vilalta,  
Juan Carlos Sancho & Soledad  
Madridejos, Carme Pigem & Rafael  
Aranda, with Angela Moura

### Art Direction & Design

Juan Roldán [nomorefracasos]

### Assistant Editor

María Cifuentes Ochoa

### Photographs

Oscar del Amo (p. 101, right); Luis  
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(p. 27); Débora Mesa (pp. 20, 21,  
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(p. 101, left); Enric Ruiz Geli / Cloud  
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### Translations

Beth Gelb (Introduction and Essays),  
Lucinda Morrisey (English Revising  
interviews), Víctor Orive, Robin White

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Universidad Europea de Madrid  
School of Architecture



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Gerardo García-Ventosa López

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Nader Tehrani



# Ministry of Public Works

The curators of the SPAINLAB exhibition, with which the Government of Spain's Ministry of Public Works is attending 13th International Architecture Exhibition this year at the Spanish pavilion of the Venice Biennale, call us upon to reflect on what innovation means as it applies to architecture.

And the first response that comes to mind for us is that we are unaware of what we do not know about the future of architecture. Only time will tell. But architecture will almost certainly not be what we understand it to be today. Like the society that receives its works, architecture evolves, based on fixed principles, at a pace set by technological development and changes in its collective awareness.

Doris Lessing taught us quite a while ago that we always live within the remains of a previous culture. And this can be felt, particularly in architecture. This is what Spanish philosopher Juan Antonio Rivera calls the "weighty inheritance from the past". Dependence on the road taken by architects is so great that in order for change to take place, it either requires the visionary ingeniousness of the artist, or social evolution imposing new demands and paradigms.

I believe it would be enough for a single one of the lines of work that a Spanish architect presented at SPAINLAB to partially determine the future of architecture in order for this government's aim, and the effort of everyone involved in this project, to have been worthwhile.

I firmly believe that will be the case, that we will be able to please in all of public and private institutions alike that have worked with the Ministry of Public Works to make SPAINLAB: Acción Cultural Española, S.A. (AC/E) possible, specifically: the Spanish Agency for International Development Cooperation (AECID), and the Caja de Arquitectos Foundation. Our most sincere appreciation goes out to each and every one of them. As it does to the curators, Antón García-Abril & Débora Mesa, and to the teams selected to participate in this year's Venice Biennale of Architecture, a platform whose digital version will serve as a meeting place and for broad exchange of innovative ideas.

**Ana María Pastor Julián**  
Minister of Public Works

# Caja de Arquitectos Foundation

In these times of great uncertainty for those in our profession, it is a great satisfaction for me to witness the burgeoning of so much vitality and international acclaim brought out through Spain's participation in the Venice Biennale, a point of encounter for people with a variety of sensibilities and different cultures, and, above all, an opportunity for renown professionals and new generations to mingle.

The Caja de Arquitectos Foundation, faithful to its objective of working with initiatives and activities that contribute to the knowledge and dissemination of architecture, has the honour of contributing to the publishing of the official catalogue reflecting Spain's presence at the 13<sup>th</sup> International Architecture Exhibition in the Venice Biennale Architettura 2012.

**Javier Navarro Martínez**

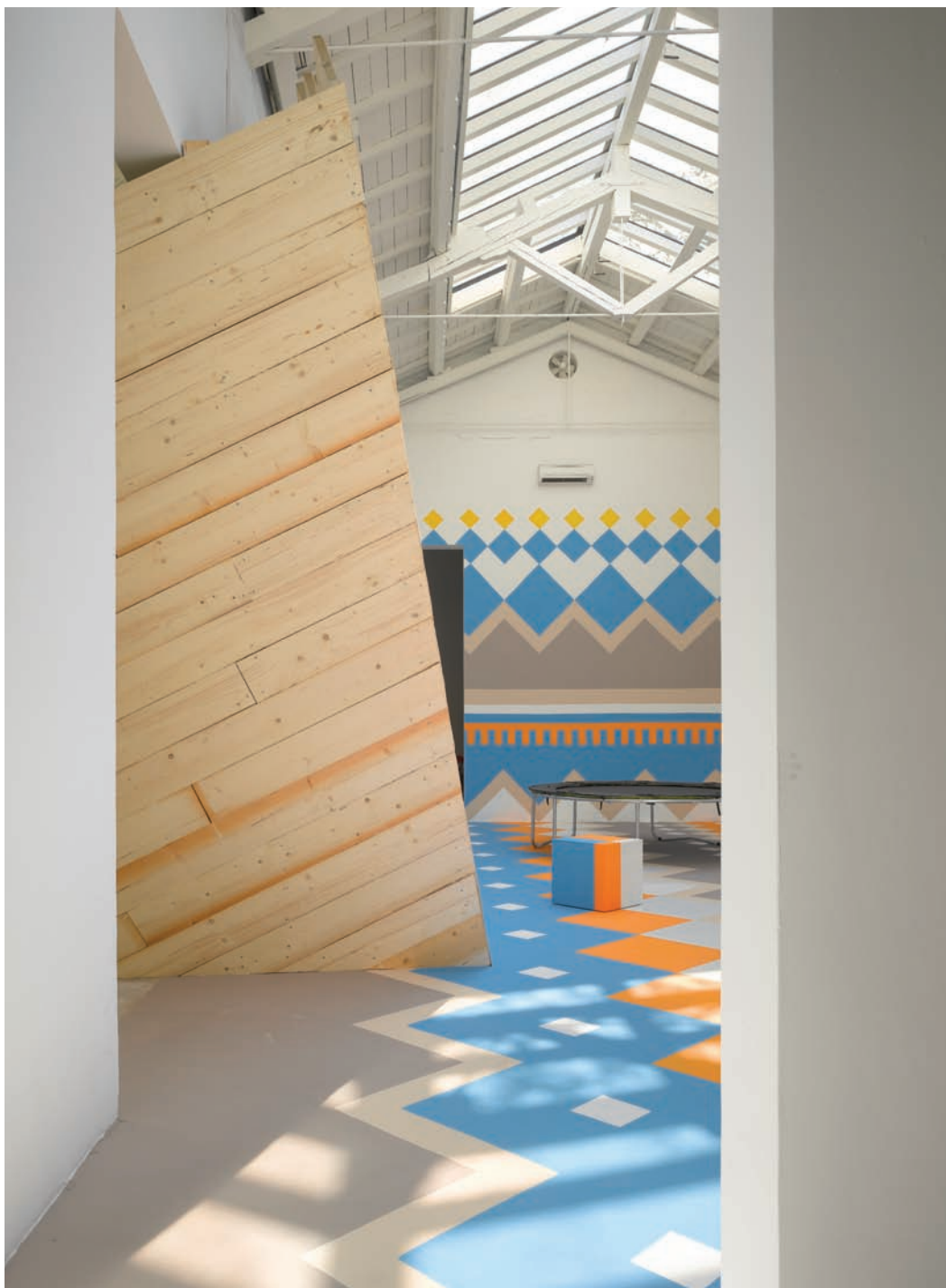
President of the Caja de Arquitectos Foundation







*selgascano seen from Menis Arquitectos*







*Front: Sancho-Madrdejos Architecture Office. Rear (from left): selgascano, Menis Arquitectos, Ecosistema Urbano*

# SPAINLAB

## Antón García-Abril

### Curator of the Spanish Pavilion

At this 13<sup>th</sup> Venice Biennale, the Spanish pavilion is participating convinced of the need to defend architecture that stems from committed research and creative freedom. We understand that setting a common ground is based on the recognition of individuals. Only through personal intuition can architecture progress while taking care of society's needs.

Spain is culturally diverse, intellectually rich, bold, imaginative and productive. And our best architecture reflects that. Now, when spirits seem to slacken at the pace of the world economy, we find it is just the time for reflection, consensus and rebuilding the systems that have made our society a delicate machine. We have to reinvent everything, because everything changes. We have to innovate so as not to be left behind. And we have to bring down the barriers that prevent creators, scientists, students and workers alike from carrying through with their tremendous effort.

SPAINLAB would like to display this positive attitude and put forward a new value system based on excellence, research and free teaching to new generations who are sure to better understand the complex, changing world that we live in today. Over the last few decades, Spain has been admired for its capacity to produce, for its drive in both the economy and social issues, and for the quality of its architecture, which faithfully reflects all of this. And our architecture continues to meet with international acclaim, no longer because of its overall volume, but rather due to the extraordinary worth of its architects whose own designs, each in its own way and in its own environment, are able to break through the barriers of commonplace. And they do this singlehandedly by casting light on the challenges ahead, by building their own languages and systems, and by seeking their own space.

SPAINLAB wants to show the world this spirit by outlining the future of architecture as the sum of individual adventures where new territories are chartered, new partners are sought and progress never before seen can be forged. The selection of talent gathered by the Spanish Pavilion this year reflects only a small sample of our country's architectural heritage. Spain has been exemplary in its way of understanding life and the work



of architects on all scales, from industrial design including the reinvention of sanitary fittings, to the structuring of a world urban development system through a new protocol for all cities to join by consensus. All of the professionals are able to do this and they are all attempting to do so in their practices. They balance their time between research, teaching, and exercising the profession of architecture through public or private initiatives. This is how they share their knowledge with society, heeding the demands they understand to reflect the needs of the immediate future. Without being called upon, facing the many difficulties stemming from rejection of anything new, of change, they generously put their work forward. But they have met with the success because in society, inherent talent always prevails over adversity. The curators and our whole team have worked to afford this free working space for the architects chosen to represent Spain. The pavilion is built from scratch and fleshed out so that the visitors can take a walk through and penetrate each studio's own intimacy, the concerns and findings of each studio's teams. The idea is for the visitor to come away with a surprising, new, refreshed vision of Spanish architecture. In previous Spanish pavilions, the overwhelming aim was to integrate, geographically and generationally speaking. The exhibition's accompanying platforms will serve as hubs for exchange of ideas among the scientific community and society. And the pavilion will be open to new designs by students, institutions and companies in order to issue an urgent call for innovation and regeneration in our architecture.

At SPAINLAB, our keenness on creativity, rigour, and knowledge, and the poetics of our action is what brings us together. And what sets us apart is our heritage, our being. And that is what sets our architecture apart with it. What brings us together is life's divergence, the boldness with which we face life, the vision of a much better world and the conviction that we can help build it.

# *Innovation, divine treasure*

## Débora Mesa

### Curator of the Spanish Pavilion

Opinions are divided as to whether or not innovation is a link in the chain of proper work, or a boom occurring beyond any logical sequence. It can probably be both at the same time, and most often lies somewhere between the disciplined process of investigation and sheer creativity. What is certain is that if innovating has to do with improving what exists, and investigating, with trying so, then these two actions should be the objective and the basis respectively of all disciplines. But, undoubtedly, of Architecture. Without innovation, the heavy machinery that engages the world would not move. And this is something that we cannot afford considering that the environment in which we live is far from being in perfect balance, if that balance can be struck at all.

Under these circumstances, any effort not aimed at fixing what does not work or improving what does but could work better should be considered futile. However actual fact shows us that once and again, this axiom does not hold true. In fact, it could be said that, except in extraordinary contexts, innovators or those who strive to be, far from being treated as heroes and supported by society feeding from their achievements, usually face a headwind; they swim against the tide, taking on risks, and forging their progress singlehandedly. And only if they survive a harsh Darwinian selection process can they find themselves rewarded for their efforts, though without much of any guarantee at all.

Innovation involves making a leap in the dark, from firm ground to the unknown. Findings need a process of accommodation; also of digestion by those who think they know everything there is to know and resist accepting what is new. And the innovator, in order to become one, has to take on a wide spectrum of chameleon-like roles to play the enlightened wise person and the prestidigitator at the same time. Pablo Picasso knew how to tuck away *Les Femmes d'Alger* in time and withstand a nearly ten year silent battle until the world of art accepted his work and acknowledged its revolutionary nature. But unfortunately, we as architects do not have that great ability to hide away our completed works until the world is up to the task of integrating them. Our profession requires us to connect with industry and society and to play our cards without any





*Demolition of Miguel Fisac's La Pagoda. Madrid, 1999*

slight of hand. In principle this is a privilege, or to put it better, it would be if the system were better designed. But it isn't really. And accidents happen which we, unlike Picasso, are unable to nimbly skirt around. Because if once tested and built, had Miguel Fisac been able to hide away his masterwork on the calle Josefa Valcárcel in Madrid, known as '*The Pagoda*', until the storm had passed, things would be very different and those who love our profession would not look in shame at the same plot of land where a vulgar mirror office building now stands in its place. Nor would we see the rusting away of the magnificent *Brussels Pavilion* by Corrales & Molezún, left to waste away in Madrid's Casa de Campo park. We would instead have tucked it safely away in a drawer until someone knew how to redeem its honour for architectural culture. We wouldn't have to be sorry and upset about these and other attacks on good taste and professional decency. But unfortunately these fictions defy reality.

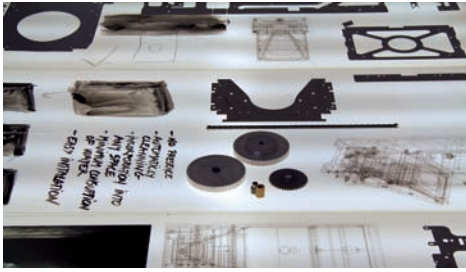
Other staggering figures can be added. While academy has generated 22 Nobel Prizes in Switzerland, 6 in Italy, 86 in the United Kingdom, 31 in France, 317 in the United States and a long list of etceteras; in Spain, only Santiago Ramón y Cajal maintained certain ties with university in order to carry out his research on the structure of the nervous system; the other six laureates (José Echegaray y Eizaguirre, Jacinto Benavente, Juan Ramón Jiménez, Severo Ochoa, Vicente Aleixandre and Camilo José Cela) worked without any academic affiliation in Spain, though not abroad. This is no coincidence. Nor is it a question of talent but rather an infrastructural and cultural problem, perhaps also a matter of conscience that it is incumbent on us to tackle at its very roots. And time is not exactly on our side. It makes no sense for research, and therefore innovation that may stem from it, not to be directly underpinned by an educational system that cultivates both, and an industry that links them into the real world. Otherwise, they have little chance of making any impact on society.

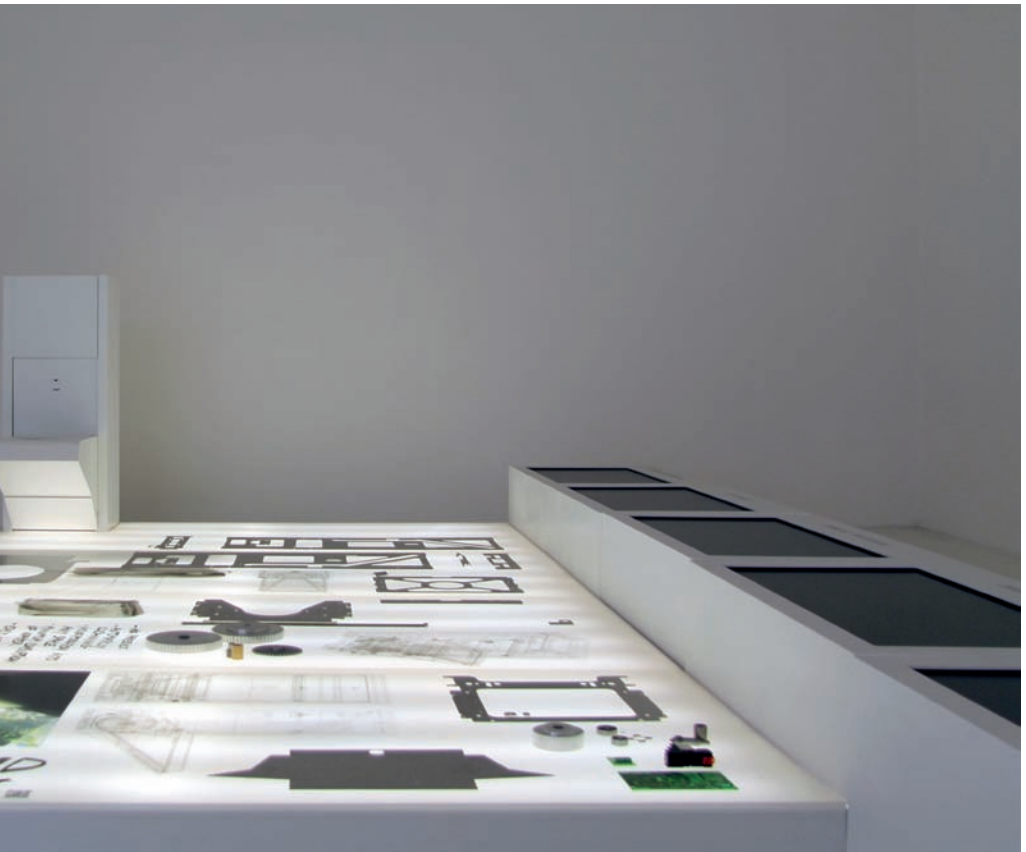
There are issues on which no turning back is possible. But there is a very clear path forward: there is no alternative to placing the necessary means at the disposal of those who work towards a better world so that they find, also within Spain's borders, what it was that led them to emigrate or cut

themselves off; and in order for quality, irrespectively of quantity, to stand as the prevailing value in any action. This way our distorted senses will be able to recover from their hypertrophy over the last several years and once again appreciate the proper scale of things.

All we need to do is rid ourselves of our age-old complexes and look around a bit, abroad, and at home as well because luckily there are an increasing number of initiatives arising that seek to promote, provoke and support innovation. SPAINLAB is one, and aims to make its modest contribution to changing spirits and generating an optimistic outlook towards the future of architecture.

There will be those who will still want to clutch at straws, but if I have to choose between the old saying "*better the devil you know than the devil you don't*" and the lyrics to Serrat's song "*I prefer the wise men I have yet to meet than the fools I already know*", I am clear about which one I'll opt for.











*Enric Ruiz Geli / Cloud 9*





# Ecosistema Urbano

Ecosistema Urbano is an innovative agency focused on the understanding of the city as a complex phenomenon, from a point of view between architecture, urbanism, engineering and sociology. The team's field of interest is defined by something they call 'creative urban sustainability', from where to react to the present situation of cities through innovation, creativity and particularly action.

Its principal members have been giving workshops and lectures at the most prestigious institutions worldwide (Harvard, Yale, UCLA, Cornell, Iberoamericana, RIBA, Copenhagen, Bergen, Munich, Paris, Milan, Shanghai, Madrid, Buenos Aires, Santiago...) and their work has been nationally and internationally awarded in more than 40 occasions.

In 2005 Ecosistema Urbano received the European Acknowledgement Award from the Holcim Foundation for Sustainable Construction (Geneva, 2005). In 2006, they were awarded the prize of the Architectural Association and the Environments, Ecology and Sustainability Research Cluster (London, 2006). In 2007 they were nominated for the European Union Prize for Contemporary Architecture Mies van der Rohe Award "Emerging European Architect" and received the AR AWARD for emerging architecture in London. In 2008 Ecosistema Urbano received the first prize NEXT GENERATION AWARD from the Arquia Próxima Foundation, and in 2009 the Silver Award Europe from the Holcim Foundation for Sustainable Construction.

During the last years their work has been covered by more than 100 media from 30 countries, and their projects have been exhibited at multiple galleries, museums and institutions. At present their work is being shown at the Design Museum in London at the exhibition 'Sustainable Futures', and they are preparing exhibitions at the Deutsches Architektur Zentrum in Berlin and Pavillon de L'Arsenal in Paris.

In parallel, they have created a communication platform through new communication technologies that develop social networks and manage online channels around the subject of creative urban sustainability.

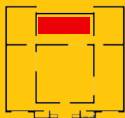
Architects  
Ecosistema Urbano

Collaborators  
Boamistura + Lugadero

Materials  
Paint, wood, books and objects brought from  
Norway and Spain

Time for completion  
7 days

Approximate dimensions  
2 x 6 x 7 m



# Dream your City:

a global creative set of new tools to rethink and transform local urban life.

As architects and urban designers who approach the city as a complex and multi-layered phenomenon, we realised that in recent years a deep transformation had occurred in the way architects interact with city-related issues.

Ecosistema Urbano is working on the research and development of tools that provide new opportunities for interaction and participation, enhancing creativity and incorporating the new technologies so that different groups can participate in different ways.

At Ecosistema Urbano we learned -by doing- that knowledge and creation are becoming hybrid and widespread phenomena which are transforming traditional closed and fixed structures into open and extremely flexible networked configurations.

Knowledge, creation, learning, society, culture, urban and architectural design: all these fields are getting closer to a network structure.

This trend of high connectivity network creation and complex dynamics is nothing other than an intrinsic feature of

today's world, and we believe that this model is revealing itself to be more suitable and efficient, particularly when it comes to innovation.

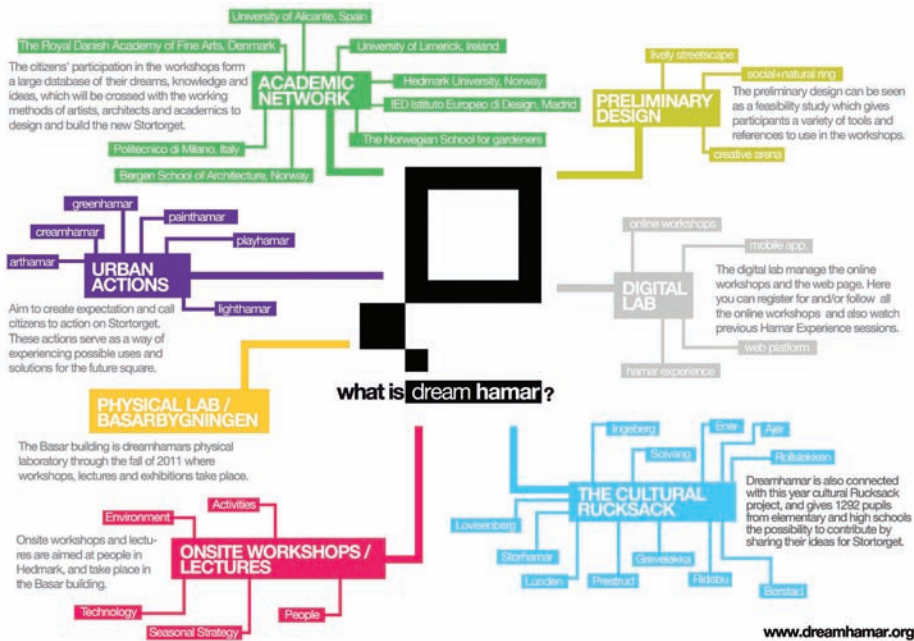
It also creates a new field of research and study that we have named 'network thinking' and defined as a network approach to the creation, design and development of projects, ideas, strategies.

We believe that in this new context citizens should somehow be incorporated as active agents, thereby avoiding the conventional scheme of client-spectator-recipient of a finished product and becoming acting-producing citizens of an open and augmented space that could be modified according to the users' needs in time.

We really believe in people, in their inner creativity and in the power of collectivity. A new public space can either be something directly given to the city without any interaction with the people, or something that can be used as a unique opportunity to empower the links between the citizens, planting the seed for a collective future. This second option is more challenging and risky, but of course much more interesting.

The only way to activate a real network design process is to design an atmosphere which stimulates citizens' actions and reactions, rather than offering conclusive oriented design and submitting the closed product for the citizens' approval.

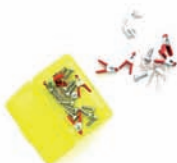
Understanding the city through its public spaces and sensitive areas in permanent transformation, capable of adapting over time to meet the various demands, defining spaces or platforms to support interaction and experimentation, Dream your City aims to inspire cities worldwide in the creation of new means of collective communication and interaction for rethinking and transforming urban life.

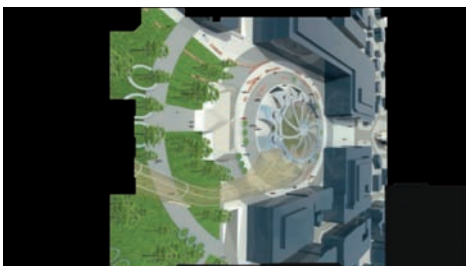




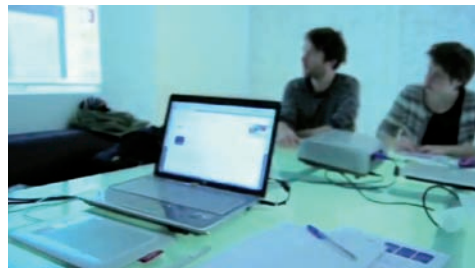
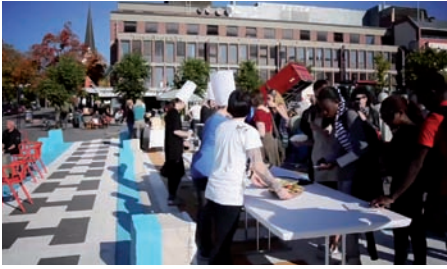
Objects from Hamar







Stills from the installation video



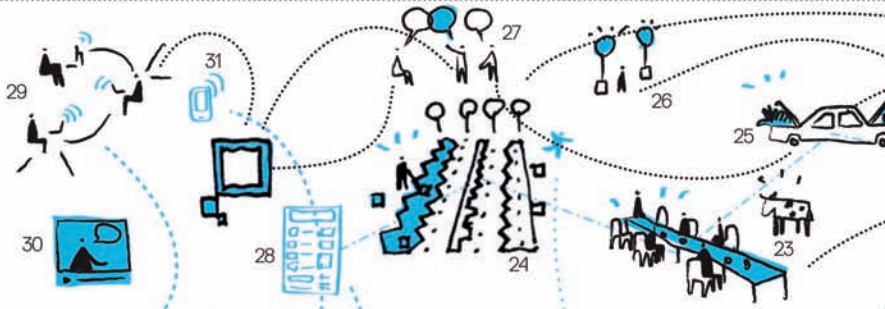


# DREAMHAMAR

digital

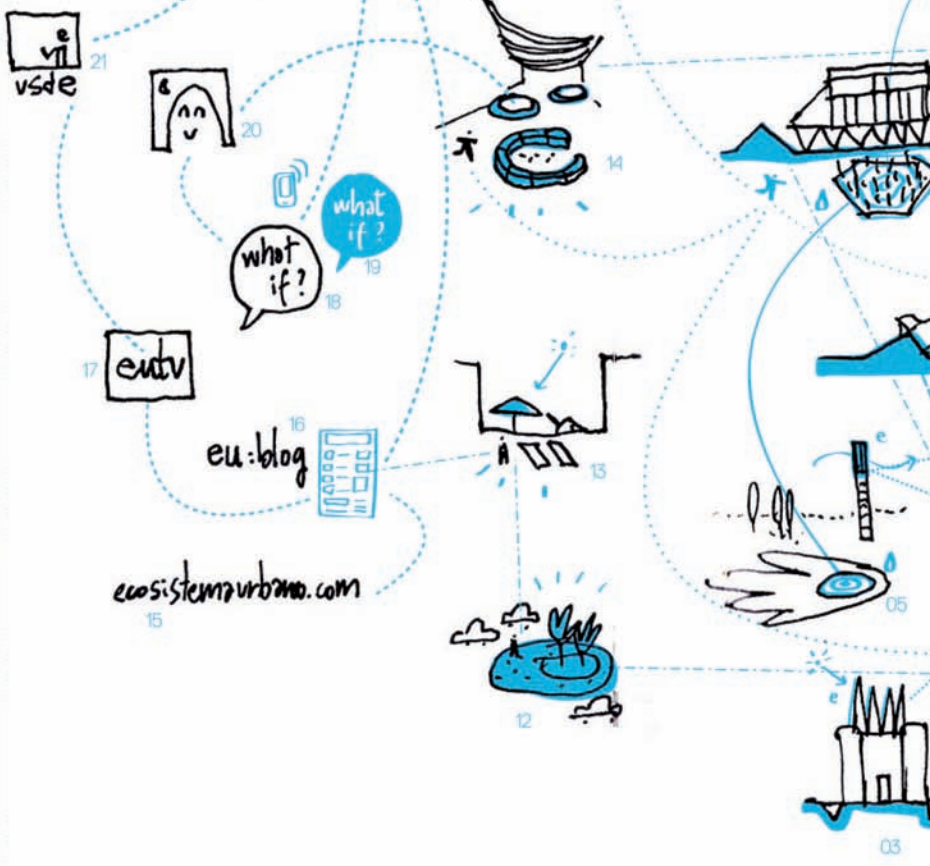
urban actions / workshops

2012



2010

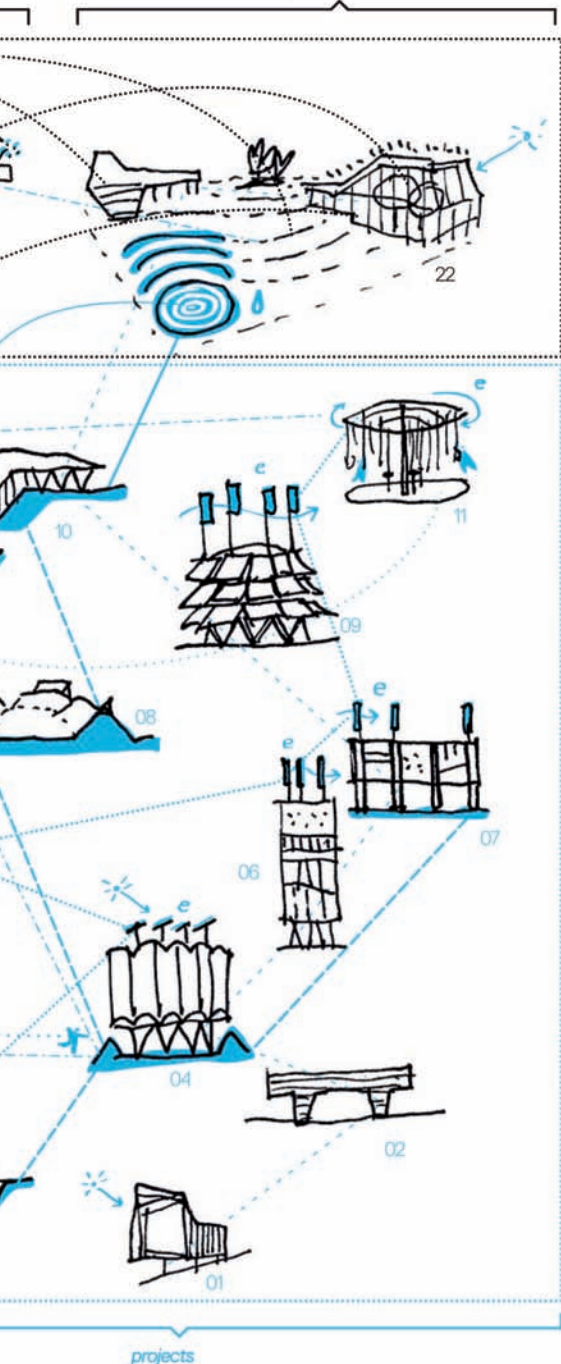
2012



digital

urban actions / workshops

ecosistema urbano



## ecosistema urbano

### projects:

01. House of steel and wood, Asturias
02. Magnetic Fields, Prague
03. Meteorological Museum, Madrid
04. Eco-boulevard, Madrid
05. Water park Expo08, Zaragoza
06. Urban Voids, phase I, Philadelphia
07. Urban Voids, phase II, Philadelphia
08. Regeneration of an old landfill, Marlbor
09. Aintree Expo2010, Shanghai
10. Plaza Ecopolis, Rivas-Vaciamadrid
11. Energy Carousel, Dordrecht

### urban actions/workshops:

12. Park(e)ing, Alcalá de Henares
13. Playa Luna (beach on the moon), Madrid
14. La Noche de los Niños, Noche en Blanco, Madrid

### digital:

15. ecosistema urbano website [ecosistemaurbano.com](http://ecosistemaurbano.com)
16. ecosistema urbano blog [ecosistemaurbano.org](http://ecosistemaurbano.org)
17. eutv [ecosistemaurbano.tv](http://ecosistemaurbano.tv)
18. what if? digital participation tool [whatif.es](http://whatif.es)
19. what if? app
20. lanochedelosninos.org
21. urban social design experience [urbansocialdesign.org/usde](http://urbansocialdesign.org/usde)

### dreamhamar:

#### project:

22. New Stortorget urban design, Hamar

#### urban actions/workshops:

23. creamhamar
24. painthamar
25. greenhamar
26. lighthamar
27. onsite workshops

#### digital:

28. dreamhamar blog
29. online workshops
30. hamar experience
31. dreamhamar app

#### strategies/connections:

- topography
- ..... sheltering
- ..... energy
- water
- ..... city as a playground
- ..... people
- ..... digital
- ..... dreamhamar

# 05.16.12.Madrid



[BT] Belinda Tato [JV] José Luis Vallejo [Q!] Inma E. Maluenda & Enrique Encabo

## ECOLOGY

**[Q!] What does the term “ecology” mean to you and how is it embedded in your work?**

[BT] Back when we were studying, in the nineties, the approach shown to us was that of architecture being about the creation of unique and self-absorbed objects. However, for us the term ecology means that what we produce belongs to a context, to specific conditions, to an accessible technology, and that the work system creates fully interconnected situations.

The change is to understand architecture as a living element that remains for years and that must function as best as possible throughout its life. To understand time as a relevant variable when designing.

[JV] This belonging to the context occurs in all areas, also in the technical and social. When we started the Ecoboulevard we had some concerns; but from the response we received we then had others. Another issue that obsesses us now in relation to ecology and sustainability is education itself. As a teacher, I consider it essential that students link what they are taught to the world we live in, because I believe that both architectural education and architecture itself are still self-absorbed.

Initially, our obsessions arose from the hardest technique, the ecological data. Unfortunately, green has been understood as a mere sum of indicators. For us, this idea has no value. A project might have certain labels, but it may be inadequate in a given context. So the key issues are about education and an understanding of reality in a full context.

## ECONOMY

**We are at a time in which to build is a complex option, it seems that it is a time for reflection rather than action. To what extent do you consider that these times encourage proposals like yours?**

[BT] I do not think we have adapted to the times, but that it is about a personal interest and a genuine attitude. When asked how we define sustainability, our answer is simple: to live in a city with a range of facilities and uses for the essential needs at a distance that can be covered on foot or by public transport. And as for the economy, it is the same. Irrespective of the fact that the context requires us all to be more efficient today, we do not identify with the excesses that have occurred because we think the value of a home or a public space should not be in the material or about finishes, but in other things that do not affect the budget, like the amount of light that enters, attached public space or its integration in the city.

[JV] It is not about denying the technical, but a question of criteria and priorities. It is a general reflection, it seems clear that present times are imposing a change in the vision and strategy of architecture. This turning point appears cyclically in history... remember, for example, how after World War II new means of production appear, more appropriate to a new way of doing things, and how after the oil crisis the bio-climatic and ecological strategies were reinforced.

### **How do you think the current crisis is shaping this new vision of architecture?**

[JV] The most interesting changes are social. We had come to believe that many things happening did not affect architecture and that as architects we could operate in a completely isolated manner, arguing that society did not understand because we did not speak the same language.

[BT] I would add two things. On the one hand, flexibility; contrary to the idea that things will remain as they always were, these convulsive changes we are experiencing, absolutely unpredictable, also suggest that architecture has to somehow respond. What mechanisms can be created to ensure that what is built can fit into the new economic scenario? The answer requires tremendous creativity. Furthermore, the communication and technology we now have allows us to access much broader information than in past years, which also affects the citizen, who as a customer or consumer will be increasingly more demanding due to being more informed. I hope this issue will lead to an increase in quality standards.

### **TECHNIQUE**

#### **Your projects, from the Ecoboulevard to the Plaza Ecópolis, start from a very precise technical design. Do you think your work defines material-based work strategies?**

[JV] The interest in materials has always been with us; what has changed in our case is the focus. At first we were so obsessed with the relationship between the technique and ecology, with the use of resources. Now our attention is focused on the social filter, ie, on relationships between people and how they affect the architecture and urbanism.

[BT] Fifteen years ago trying to innovate with materials required an extraordinary effort, because access to information was very complex. Today access to communication is immediate, but it can be exhausting. Our contribution tries to figure out what is being done, what are the most efficient systems and share it with others. Because our responsibility is to be informed, not so much to invent (it is very expensive and we do not have so many projects that allow the testing of solutions), but rather to incorporate the most efficiently proven or innovative in how they are used. EuTV [Urban Ecosystem TV] is an effort in this direction.





Plaza Ecópolis. Rivas, Madrid

**In your work time is almost biological time, rather than architectural. How does the approach vary between an ephemeral project, although long-term as with the Ecoboulevard, to another of permanence like Plaza Ecópolis?**

[BT] We believe that the work of the architect should have a monitoring phase: see what worked and what did not from a technical, social or energetic dimension, then move on to determine the regulation mechanisms, control or change for future work. But one never has the time or the resources, nor does anyone seem to care, not even the administration itself. This is a very shortsighted vision, and yet the buildings will be there many years: it is a responsibility of the architect in the very long term. It would therefore be very interesting if the architect could, if not manage, at least monitor the integral behaviour of projects, as it seems to be the only way to improve their work.

## **ATMOSPHERE**

**The word “atmosphere” is constantly repeated in your architecture. The atmosphere is what the Ecoboulevard provided, the Retiro meteorological station deals with the atmosphere, and in Plaza Ecópolis you speak of “fuzzy boundaries” and comfort to explain the action of the canopy that covers the building and the transition from outside to inside. Is atmosphere just another material for you?**

[BT] Yes, no doubt.

[JV] It is about understanding the world we live in. Until recently, the relationship we had with the creation of an atmosphere in a space was almost limited to choosing the least obtrusive air-con grilles. And it is something that affects comfort in an essential way. We were obsessed with gravity and with structures, without realizing that the facilities occupy a far greater space and much bigger part of the budget.

[BT] The experience of being in a place not only has to do with materiality, but also how

you feel, if it is hot or cold, the smell, or how the space is being ventilated... In this regard, we have lived with an excessively visual architectural culture, too limited to the two-dimensional photograph. Perhaps thanks to computers, in a few decades, we will have a really atmospheric experience.

## STRATEGY

**One of the backbones of Ecosistema Urbano's work is determined by communication strategies. How important are the communication media in your work?**

[BT] We started our blog in 2007 to generate a node of information in order to share interesting ideas that we came across working: social projects, materials, people... Then, there were very few blogs devoted to architecture. The goal was never to create a corporate website, because we are unsure if it is of interest simply to view our projects; we understand them rather as a small grain of sand on a superb beach. So it all started with this node and today we continue with the same idea. In fact, due to lack of time just less than 25 percent of our work appears in it.

[JV] We have also designed the blog with the response we received from outside and with feedback. And it has helped us realize the penetration this type of media can reach. One is aware of the impact when you start to see the visitor statistics, to the extent that most outsiders only know us for our blog.

**In Hamar (Norway), the project itself is a communication strategy of occupation. In fact, Hamar has its own blog. Do you think that advertising in the strict sense, is essential to your work? Is communication part and parcel of this project?**

[BT] In Hamar we have used the concept of network design, ie, we are not going to be the designers, but we work with a network of others interested, both locally and globally. Therefore, communication has taken place at different levels, in two languages (Norwegian and English) and in two places (Norway and Spain), using traditional media local to Hamar (newspapers, flyers and posters) while using online calls for the overall strategy. So the first phase of this project has been 60 percent a communication project with feedback, because if you do not reach the public you cannot get them to manifest, to say what interests them or not, to communicate activities and ensure people participate, as well as to become familiar with the results. It has been a very intense process that has required an extraordinary effort in many ways.

**Do you not think that instead of trying to break away from marketing, architecture should use it?**

[BT] The communication made during the twentieth century, in extraordinary and prestigious magazines, was a communication by architects for architects, too inbred. Maybe that is why we see it as pejorative because it is not enough. We should aim today towards a communication of architecture to get everyone interested, because it affects us all, considering it is the very city in which we live. I think the challenge is to overcome such limited language. The question is how can we create a real interest for people to have greater sensitivity and demand better quality, so that ultimately this impacts on the urban quality.

[JV] Also the projects are still communicated in a very unidirectional manner. New

technologies allow for feedback from users. In architectural magazines the information does not go beyond what you see in the photos, and we are at a time when one needs to have many more layers of information.

## **PUBLICITY**

### **What is a public building for you?**

[BT] A public building, like a public space, is a place for everyone to manage responsibly, because it is paid for with public money. So it should be as efficient as possible, both in construction and maintenance. For us, a public building is not a work of art, but must have the capacity to accommodate new uses at a given time and be well managed from conception through to construction and maintenance.

[JV] Public buildings should be utilized to generate city. One of the most important things we have learnt in our work is that what happens outside of buildings is much more interesting than what happens within. If we manage to bring these qualities from the outside to the inside the mechanism will also lead to a better use of resources. Plaza Ecópolis hosts this idea. At first the Town Hall of Rivas wanted to build a school, but we convinced them that the related public space was more important than the building itself. And the battle of the entire project has consisted of transferring part of the building budget to a public space. Why? Because after school the kids have ten minutes waiting time, and if this happens in a space that claims their attention and begins to promote civic relationships, you are generating city.

Architects and engineers are accustomed to making urbanism from the physical changes such as the making of a road or defining the boundaries between the public and private. We believe that planning can be done also through social activity, relying mainly on new technologies. You can make urbanism from a layer that is mobile and temporary, this also has to do with the biological time that we mentioned before.

### **When do you consider a building completely finished?**

[BT] When occupied by people.

[JV] That is a question with a double reading. At the end of the building works on the Plaza Ecópolis we experienced a curious situation. On the one hand the programme was not closed, so situations arose that we could not foresee, despite having been obsessed with the proper use of the site; and on the other hand, the client did not want to change anything in case we might be upset. And we said, "Look, this site is for your use. Our work is over, so if you want to put up a net, we have nothing to say."

[BT] In my opinion, in a conventional construction project 100 percent of labour and 100 percent of the budget, resources and fees are intended exclusively for the definition of the building, from the sketch to the screw. Perhaps it would be appropriate to allocate part of the resources to a previous phase and another to the monitoring of the building during the following three years. Since the building process ends so abruptly, ways to provide continuity and monitor their progress over time need to be sought.

## RESEARCH

### How you understand research?

[BT] As the search for optimal solutions, companies, patents, research by other people, dissertations. It is an open process until the project is finished. In order to resolve we need to handle many inputs and a wealth of information.

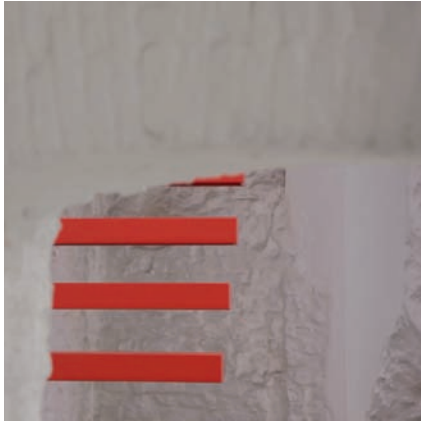
### For you, architecture is only architecture if it is built?

[BT] Not at all. If it were so there are many things we would not do. And more so today, when many architects are aware that they will not get to build everything they want.

[JV] In my opinion, architecture is about transformation. It can be done in many ways, not only building. However, as a discipline it has focused almost exclusively on the project development process. We are very interested in the periods before and after. In our case, the before, that has to do with creating the agenda and working with a community, and is becoming stronger and stronger, as in our project in Norway.



Ecoboulevard. Vallecas, Madrid



# Vicente Guallart

Chief architect, Barcelona City Council

Vicente Guallart is the Chief Architect of Barcelona City Council and director of the new Department of Urban Habitat.

He works with the new major of Barcelona Xavier Trias, the deputy major of Urban Habitat Antoni Vives, and also with an important group of professionals from the fields of urbanism, housing, environment, infrastructures and information technologies on the development and regeneration of Barcelona.

He was co-founder of the Institute of Advanced Architecture of Catalonia (IAAC), which he directed during its first ten years.

Vicente Guallart is a pioneer of the interaction between architecture, nature, and technology, proposing new paradigms based on urban, social and cultural conditions emerging from the information society. He also created his own professional studio, Guallart Architects. Now directed by María Díaz, it is a widely recognized architectural practice that has achieved numerous international awards, as well as having participated in several monographic and collective exhibitions. He is the author of numerous books, including *La ciudad autosuficiente* (RBA 2012), *GeoLogics* (Actar 2010), *Sociópolis*, *Media House Project and Geocat*, and co-author of the *Metapolis Dictionary of Advanced Architecture* and the research study *HiperCatalunya*. He participated at the Venice Biennale in 2000, 2004 and 2008.

Architect

Vicente Guallart. Chief Architect, Barcelona City Council

Team

Equipo de Hàbitat Urbà. Ajuntament de Barcelona

Materials

Video

Time for completion

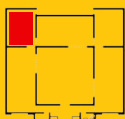
60 days

Approximate dimensions

Two projections

Advisors/Sponsors

Cisco, GDF Suez





# Barcelona as a Common Ground

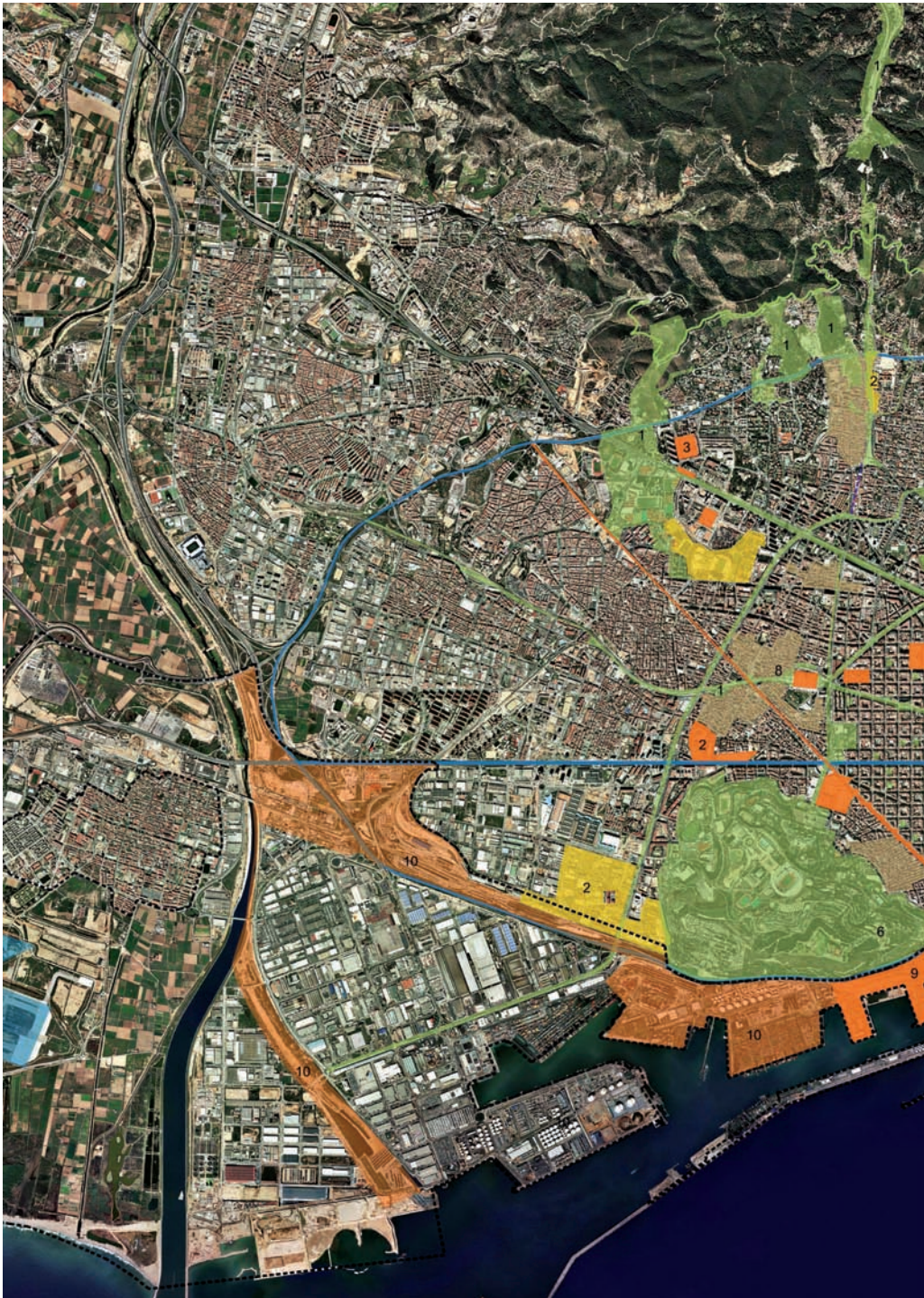
Barcelona is a Common Ground. It is the city where Cerdà coined the term 'urbanism' in 1859, and the city that in recent years has developed the celebrated 'Barcelona model', which enjoyed its period of greatest splendour during the Olympic years -a city in which every example of economic and social progress is embodied in the public space. Now, twenty years later, all over the world the urban is facing the new challenges of the information age. This being so, Barcelona is renewing its commitment to its continuing tradition of innovation at times of paradigm shift, and has developed two new mantras: "Barcelona wants to be a city of productive neighbourhoods at a human pace, making up a hyperconnected city of zero emissions."

"Many slow cities in a smart city." With this in view, Barcelona is acting on two levels. On the one hand the city is continuing the projects initiated in recent years in order to generate urban innovation in neighbourhoods such as 22@, La Sagrera and Plaça de les Glòries, and is promoting initiatives that will transform the concrete reality of its citizens by means of projects such as Portes de Collserola, Els Tres Turons, Nou Barris or Can Batlló, in which the architecture will necessarily interact with a range of disciplines related to the transformation of the human habitat. On the other hand Barcelona is promoting the development of a City Protocol, in order to make understanding of the construction of the city common ground for cities, universities, companies and organizations. In the 21<sup>st</sup> century, our common ground is that people will be the cities in which we live and work, in which the real economy is produced. The City Protocol will therefore be a global, open platform, comprehensive and progressive, where cities will share knowledge, projects and policies, define indicators and common evaluation systems, and promote the transformation of our cities on the basis of ecological principles and collective progress.



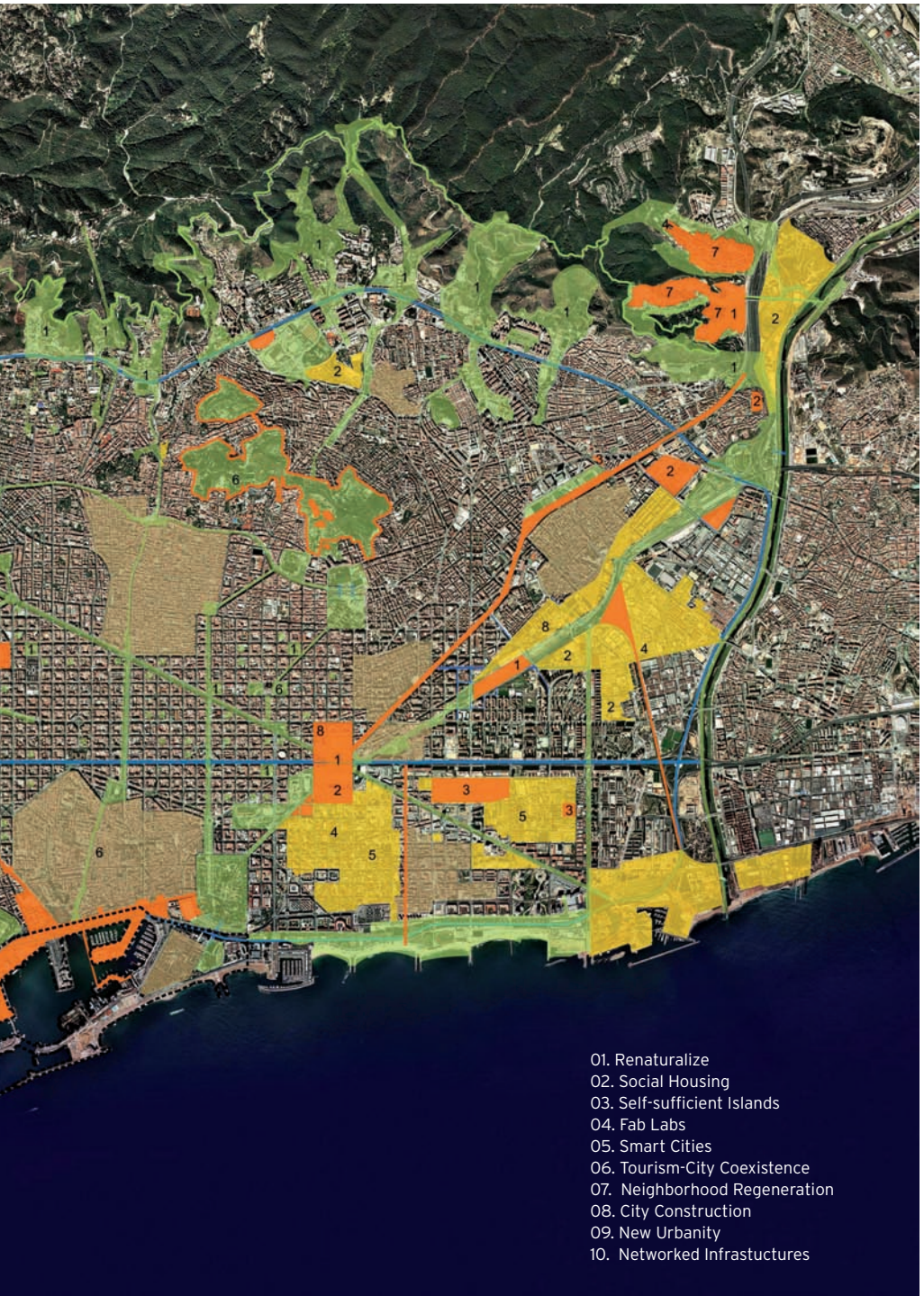
City Protocol Meeting, Barcelona, July 17-18, 2012





Barcelona City Model





Barcelona as a  
Common Ground



Network

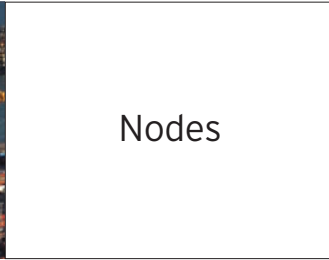
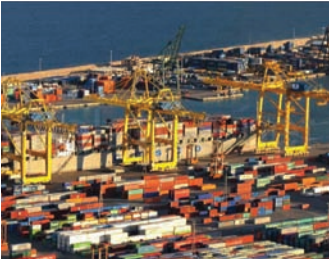


People





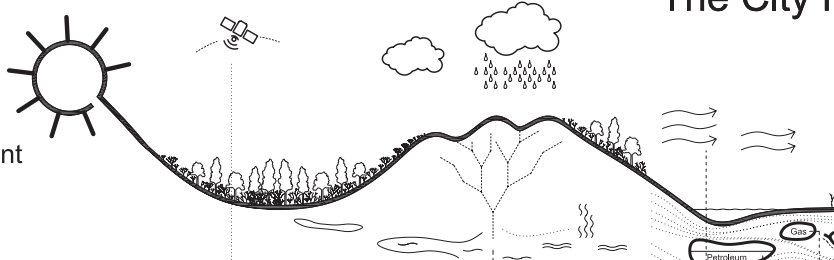
# Environment



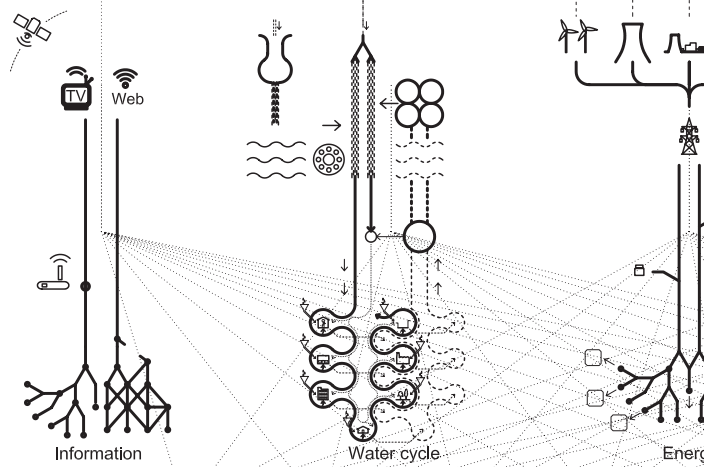


# City Ha The City P

Environment

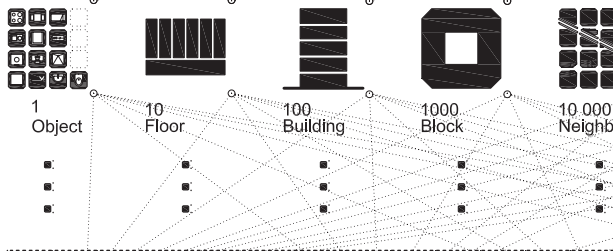


Network



Nodes

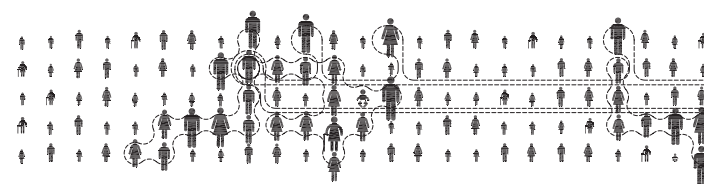
- Housing
  - Familiar
  - R-Community
- Working
  - Primary
  - Secondary
  - Tertiary Offices
  - Tertiary Commercial
  - Tertiary Services
  - Tertiary Leisure
- Facilities
  - Parks & Gardens
  - Educational
  - Cultural/Social
  - Cultural/Artistic
  - Sports
  - Administration
- Services
  - Health
  - Information
  - R&D
  - Waste
  - Garbage
  - Energy
  - Human transport
  - Logistics transport



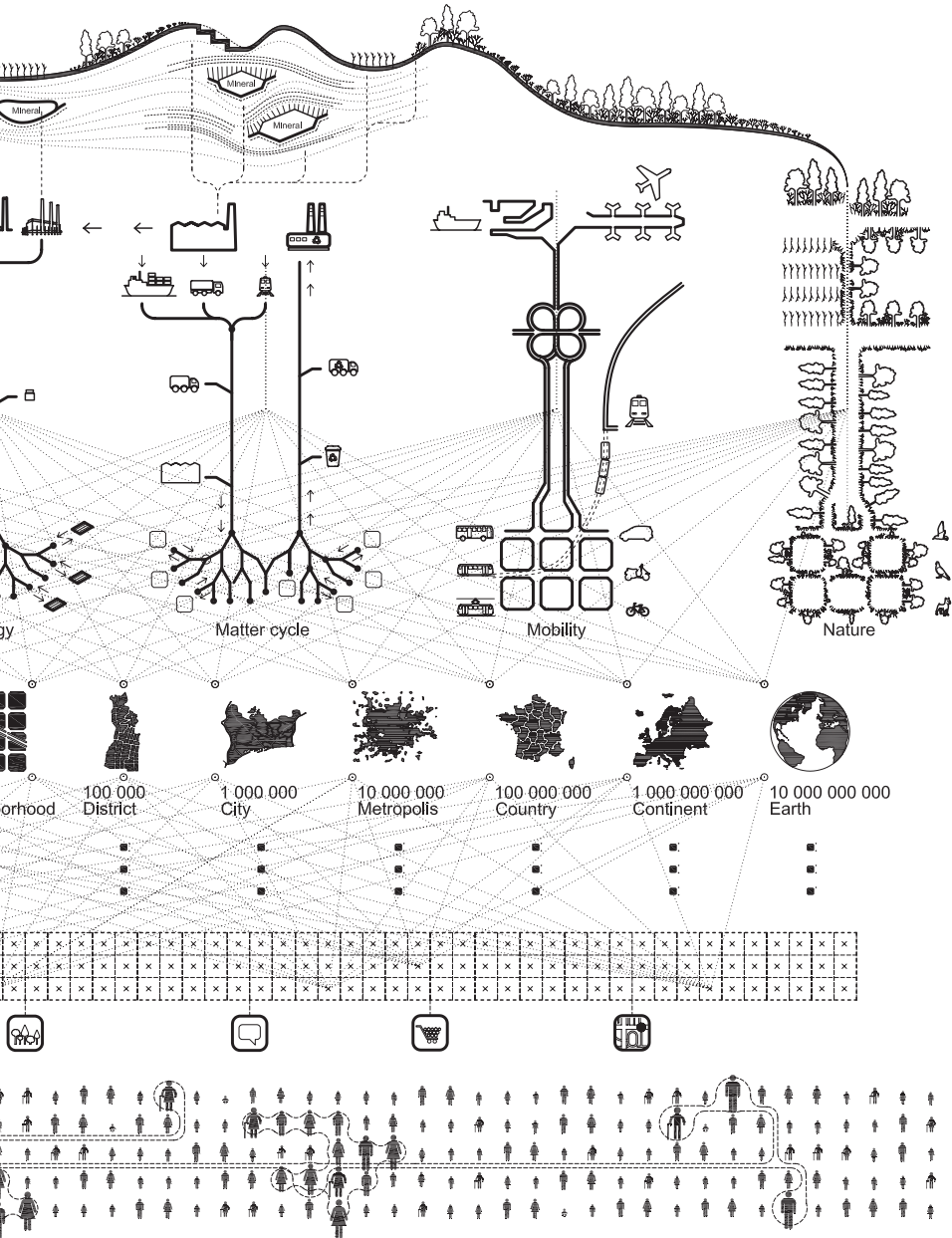
Information



People



# Habitat Protocol



# 06.19.12.Barcelona



[VG] Vicente Gualart [Q!] Inma E. Maluenda & Enrique Encabo

## SITUATION

**[Q!] As chief architect of the Barcelona City Council, can you describe the needs of the city right now in your opinion?**

[VG] 150 years have passed, since the Eixample (Expansion Plan) was approved, until all the city land has been urbanized. In all this time and at 25 year intervals or so, there has been a major change in city management policy, always led by architects, beginning with Domènech Montaner, at the turn of the century, followed by Antonio Gaudí, then Josep Lluís Sert, in the twenties, later José Antonio Coderch, already in the fifties, handing over in the eighties to the School of Barcelona... So, now with the new century, it is time for a new change.

Within this logical generation relay, linked also to political-economic changes, this new era emerges. Barcelona is now a beloved city and visited by people from all around the world, not only that, but its citizens are also proud of it. However, from the urbanistic point of view, in recent years it had lost its vision. Limiting itself to simply managing the reality, sometimes with totally unfocused –in the economic aspect– major projects, heirs of a time when the Barcelona model was being replaced by another generic or iconic one. Today is the right time to redefine a new proposal for Barcelona where, logically, the projects that were underway will continue to have a place.

## **How do you face such an ambitious plan in times of crisis?**

Just as we did in the early eighties: with a medium-term strategic vision, while implementing short-term actions that address a common agenda. For ten years now, a group of architects, sociologists, politicians and environmental scientists have worked on this urban vision. Now is the time to implement as it is well defined, what we have to

achieve, precisely, is that the individual projects, the smaller ones, respond to the other vision of a greater journey and scale.

## INITIATIVES

### **One of the first visible initiatives has been the competition for the Puertas de Collserola [Doors of Collserola]. Why start here precisely?**

Collserola is a strategic location for Barcelona because in the last forty years the city has grown on the mountain and against it, making it the backend. Now the mountain is legally protected, but no structural system has been designed in relation with it. To date, it has been defined by a red line on a map cutting out the Collserola Natural Park: “this is city and this is nature.” However, the interactions are not established horizontally, but through natural vertical corridors where nature, through the water cycle, *flows down* to the city, just as people move up to nature. In our programme the concept of re-naturalization is essential, to build the city from the public space and from nature; not a question of using ecology as a beauty enriching element, but to apply it as a structural system of the city. With this competition we have also wanted to send a message: we are looking for talent. Times of crisis are also times of opportunity; hence the claim for the role of architectural competitions. The larger scale message we wish to convey is to offer an entire profession opportunities to work, while demanding an effort to adapt to changing times and interact with other disciplines related to environment, landscape, information systems and land management, in order to discover the new skills of architects beyond design and form, such as management capacity and participation.

### **Is your performance at the town hall a natural extension of your own interests related to the geographic values of the land?**

The strategic vision of how to act on the city must be accompanied by governance structures that make it possible. Oriol Bohigas created the Department of Urban Projects in the city because until then the public space was created as an accumulation of elements: someone bought lampposts, some benches, some trees, others made a pavement and the result was a street.

The concept of making a city through urban projects not only requires a new mechanism of competitions, but also a new management structure within the administration to make it possible. This is literally the first thing we did in the administration: create the new Department of Urban Habitat, which unites under one management all aspects related to urban planning, architecture, housing, environment, urban services and all related information technologies. Besides chief architect of Barcelona, I will be responsible for this area, as manager of the Department of Urban Habitat in order to combine architecture, nature and information.

My work in the administration has three main categories. The first and most basic is to make the city work, that it is clean, well lit and *moves* properly. The second has to do with the development of projects; some already under construction which were reoriented to suit the current economic situation, and others coherent with this new vision integrating architecture, ecology and information. The third will be strategic: what to do with urban planning? How to add value to the Barcelona model? Each year more than 150 delegations from cities around the world come to see what they can learn from Barcelona as a city,

which is a clear contradiction: we have great intellectual influence on urbanism at a global level, but almost no real impact on the places in the world with big developments like the Middle East, China or India.

Moreover, urbanism – a science whose name was coined in Barcelona by Ildefonso Cerdá (1859)– requires today a much needed update following the principles of Cerdá himself: to use the most advanced infrastructures that we have at our disposal to try to bring nature and the quality of life to the city, making the citizen the center of this vision. To carry out this process today we must turn to the Internet because it is a distributed model that arises by consensus, in which the best ideas are the winners, and in which civilians attempt to control the public nature of the network and rise above the interests of companies. All this will be done with the creation of a City Protocol following of the concept of Internet Protocol (IP), an open and universal model made by consensus.

## **PROTOCOLS AND SYSTEMS**

### **Can you elaborate a little more on the concept of the City Protocol?**

This is an invitation to cities from the five continents, internationally renowned universities such as the London School of Economics and MIT, organizations like the World Bank, UN-Habitat and the World Economic Forum, and large companies in the energy, mobility and urban habitat sectors to create a big international alliance to develop a new science of cities to connect with our humanistic tradition of human habitat building, as it is updated based on the new paradigms of the 21st century. Paradigms according to which cities must move towards local production or self-sufficiency, both in products and energy. A new model that incorporates knowledge of the city's metabolism so that it can be overlapped with the traditional organization based on form and function, the tools of traditional urbanism.

### **How can this common framework avoid interference from individual politics?**

Urbanism and regulations have so far been limited to defining the limits of the reality, such as what is the minimum size of a building or the maximum surface for a place... but at no time has excellence been evaluated. The City Protocol, however, should be a platform for useful knowledge to help cities thrive, to collaborate with each other, to define standards. It is also necessary for cities to define a method of self-assessment in order to measure their actual performance. For example, how do we know if a city is well or poorly lit? We should first define exactly what is well or poorly lit, and then measure or compare the rest based on these conditions. If this idea is then transferred to a shared and open platform in the culture of an information society, it can help local progress.

### **The City Protocol intends to issue a certificate to cities that meet the requirements.**

#### **What auditing means should be established to promote this certificate? How is independent judgement to be guaranteed?**

The City Protocol is not just a certification system, but a platform of knowledge and an impulse for progress in the cities. The first thing we will do is define a taxonomy to agree on what is the anatomy of the city. If you ask a doctor from Dubai, one from Lima and one from Barcelona about the various parts of a human body, all will agree. But if you repeat the exercise with architects asking about parts of a city, each one will explain each part in

a very different manner. It is somewhat unusual that in such a diverse setting, science as such does not exist.

So, the first thing we need to establish are precisely the definitions, the criteria. We also want to learn to measure, evaluate and systematize cities. The model we wish to develop is an open model, generated by the community and not by any paid agent to certify a city based upon principles that this same agent has established. The goal is not to do business in relation to certification, but that the business arises around the knowledge and the actual transformation of the city.

## DIVERSITY

**The city seems particularly favourable for the elaboration of manifestos, however, the dogmatic interpretation has not resulted in diversity, but in uniformity and an attempted urban control. What aspects of the City Protocol ensure the specific and harmonious development, thus avoiding the problem of the generic?**

There are general principles that can always be defined. For example, what is the model that promotes the proper use of water in a city? One that generates the maximum amount of water locally, uses least energy and external input of resources, and achieves maximum distribution and water quality at the best price. Although this definition may be universal, it will be applied very differently in Abu Dhabi and in Oslo. The way these principles are implemented in each local context will have to be about their own geographical and cultural factors which depend, among other things, on the degree of development of the city and the climatology differences.



Portes de Collserola. Barcelona

## TECHNOLOGY

**One of the most repeated catch phrases in recent urbanism is that of Smart Cities, to the point of becoming commonplace. Barcelona seems to be recognized as one. What role does technology play in the City Protocol's intentions, amidst which are telecommunication companies?**

Smart City is originally a brand invented by IBM. As a brand it is now obsolete, just as sustainability is. But what remains is the impact of the information society in the building of the human habitat, with two fundamental features. One affects the model structure of management resources: moving from a centralized to a decentralized model, as from television to YouTube or from the production of nuclear energy beyond the city to local generation. The second relates to the new systems that allow for real-time information regarding the way the world works and operate it in a more efficient manner. The European Union has decided that Smart Cities is the combination of information, mobility and energy, and its final purpose is to introduce information networks in the city to improve the quality of life of citizens and the city itself.

**The construction industry is not characterized by rapidly incorporating new technologies. What could be the next possible step to connect cities with cutting edge technology?**

We are heading for a service-oriented world, not of products. It is like music: we listen to it but we do not buy the album... in the case of the city, we want to inhabit it but it is not necessary to buy the house, an incorrect investment model, almost obsolete, arising back in the first decade of the 21st century, when we thought its price increase was exponential. Therefore, if we move to a new city model as a provider of services, the new business developer will also need to provide energy and therefore will build better and insulate better, and make the right investment so the business model will not only be about the construction, but also about the building management and associated networks.

## THE PUBLIC

**At this time the concept of public, also public architecture, seems to be questioned... What is a public building? How must public architecture redefine itself?**

This is very well explained in words by Joan Clos, who was Mayor of Barcelona: a street only exists if there is a government. In Africa, for example, there is no public space. The city continues to be an invention of people to live together adequately and establish a sort of government pact. In my opinion, without public space there is no city. Therefore, the public and the collective is more important than ever, but clearly it must be decided on the basis of rational criteria and not purely political, as this crisis on the other hand is demanding. There are cities like Barcelona, a clear example where social and economic progress is embodied in the public space; while in others, progress is limited solely to the private space, and never through public architecture. From this point of view, the architecture of the city is a fundamental representation of the values that the community wishes to express.



## **RESEARCH**

### **What research tools are currently being used by the Barcelona Town Hall? What importance does the team give to this process?**

Research was already implemented prior to my joining the government action. The objective of the Town Hall is not to research but materialize and transform the city based on coherent principles. From this point of view, we are applying advanced knowledge to create competitions for architects to collaborate with powerful, high quality, interesting proposals of urban quality.

A more specific question in relation to Smart Cities is the Barcelona Institute of Technology for the Habitat, a research center we are creating and that will allow universities and businesses to interact with the City Council, in such a way that their joint expertise may be transferred quickly to the city, for the purpose of improving the people's quality of life and boosting the economy through urban innovation.

### **Is there room for the non-built in the city?**

The role of government is to manage the resources of the citizens to make a city, to transform it, so the strictly propositive is not within their tasks. However, it does include both research as well as various platforms of architecture recognition, such as the Mies van der Rohe or FAD prizes, among others, to foster the city to become a workstage for creators. The question we ask ourselves always is how can that very advanced idea be implemented today, and quickly too. As I mentioned at the beginning, we must have a long-term strategic vision to implement concrete actions in the very short term.



# Menis Arquitectos

Menis Arquitectos was born in 2005, following the decision of Fernando Menis to dissociate himself from Artengo Menis Pastrana. Since then, the studio has received different national and international recognitions after winning numerous competitions, such as those for the Island Auditorium of La Palma, the Urban Plan of Puerto de la Cruz, the Auditorium of Morro Jable, the Aurum House of Taiwan and the Music Palace of Torun, and after receiving notable distinctions such as the Prize for Innovation in Concrete, from the Foundation Ambuja Knowledge of India, the Manuel de Oraá Prize for Architecture, the Prize for the best Cultural Future plan at the World Architectural Festival (WAF), and after twice being a finalist for the European Prize for Urban Public Space.

Menis Arquitectos has for several years been devoting a large proportion of its time and effort to the investigation of different themes connected with architecture. With this attitude, it hopes to widen the frontiers of the profession of architect, reflecting on subjects such as the phenomenon of tourism, bioclimatism, research into new materials and the organization of workshops in which students, teachers and specialists from different fields all participate, with the objective of reflecting on these and other issues. Fernando Menis has lectured in centres all over the world, and has been a teacher in different Schools. Since 2011 he has been a Final Year Project teacher at the School of Architecture of the UEM (Universidad Europea de Madrid).

Research at Menis Arquitectos goes beyond the battlefield of architecture, because it aims to learn from different reasonings and experiences in order to generate synergy between the existing projects, with new approaches in order to tackle different ways of working in the studio.

Architect  
Fernando Menis

Team  
Victor Lledó, Moritz Krefter, Dulce Xerach  
(assistant architects)

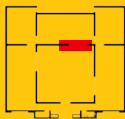
With the support of  
Gisela Neves, Javier López, Cristina Hernán;  
UEM (Universidad Europea de Madrid), CAPEDOM; Fabian Scholz

Materials used  
Recycled pinewood formwork, Foamglas and concrete

Time for completion  
8 weeks

Approximate dimensions  
7.5 m x 3 m

Sponsors  
Foamglas (main sponsor)  
Schoeck, König Stahl (Jansen), Lafarge



# Into the Wall

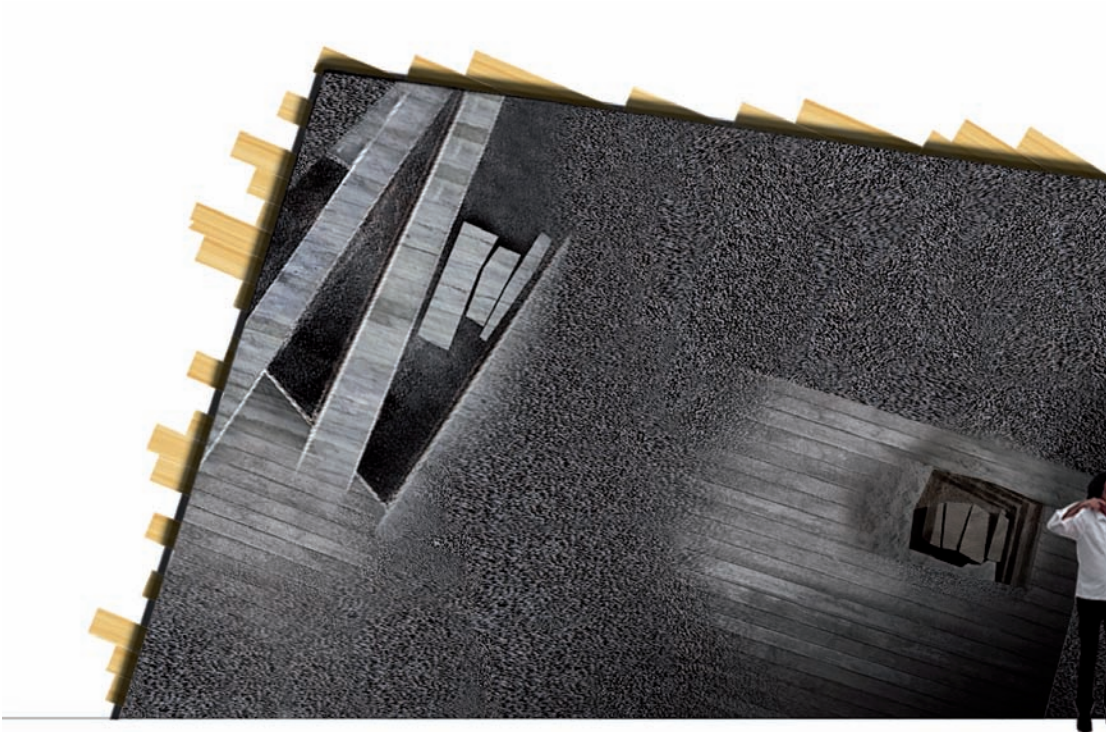
The proposal of Menis Arquitectos for the Venice Biennale 2012 allows the visitor to get inside a recently-formed concrete wall, an act that is made possible by the installation's geometry. Outside, the wooden formwork warns that something is still in the process of setting on the other side. The installation's geometry makes an already existing pavilion wall 'disappear' with a single gesture, as if dematerializing the geometric rigidity of whole. At the ends, visitors

are able to get inside this wall and to experience, through the forms of the concrete, an insight into the architectural philosophy of Menis Arquitectos. The texture of this material is emphasized through the artisanal craftsmanship of mass and void, which encourages the visitor in this journey through timeless architecture.

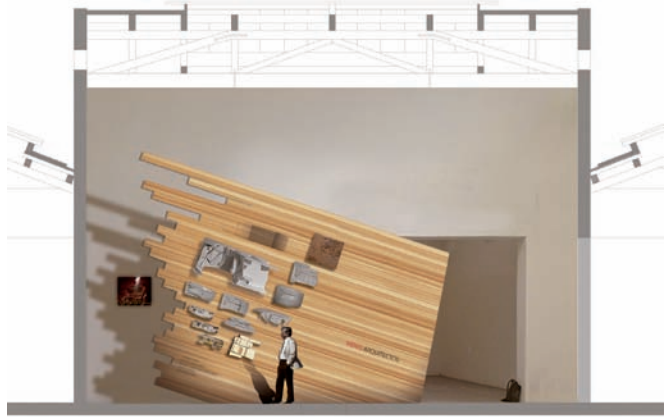
The installation shows the new construction system of Menis Arquitectos, Foamglas, Lafarge and Shöeck in the Nowa Sala Koncertowa na Jordankach. This new combination of materials allows a double-skinned construction of reinforced concrete, structural on the inside and suspended on the outside. It is an innovation in architecture.







Interior elevation









#### Wooden formwork

This is the structure which supports the whole face of the wall. The formwork, of wooden planks recycled from other works, and put up in Venice itself by professional formworkers, will be the only material seen before one enters inside the wall. It slopes slightly towards the interior corridor, producing the effect of spatial compression on the visitor.



#### Foamglass structure

Inside the installation one finds a layer of Foamglass, worked using full and empty spaces. The open pores of this material (and its soundproofing properties) awaken in the visitor a sensation of alienation from the rest of the Pavilion. This layer is anchored to the formwork by pieces of stainless steel. The different layers are joined together with some Schoeck connectors, as will be done in the future Concert Hall of the Auditorium of Torun.



#### Concrete

A layer of concrete will be applied on some sections of the Foamglass, playing with different material densities. In this way, in some sections Foamglass will be the only visible material, whilst in others even surfaces of exposed concrete will materialize, emerging from the surface of the Foamglass. This concrete will be battered or pitted, finishes which are frequent in the work of the studio.



#### Project models

On their route through the interior of the wall, visitors will encounter different models which 'emerge' from the wall or are excavated from its substance, using different combinations of Foamglass and concrete. This route aims to remind visitors of some of the most characteristic projects of Menis Arquitectos.



# ARCHITECTURAL INNOVATION

## STONE ARCHITECTURE

Ana Bautista Sports Complex

Rafael Orazarena Institute

Morro Jable Auditorium

Icod de los Vinos Observatory

Installation - Light to the Limit

Air Force Village Church

Concrete Ring - 15th Birthday of El Tanque

Jordanki / M

Agora Garden Tower

Holy Redeemer Church in La Laguna

Magma Art & Congress

Presidency of the Can

Canary Islands

Los Llanos Insular Auditorium

Sacred Museum in Adeje

Johannesburgo Urbanistic Study

Park of Cuchillitos de Tristán

Harbour Masterplan of Puerto de la Cruz

**SMALL SCALE URBANISM**

**SUSTAINABILITY**

**LANDSCAPING**

Cold Box Project  
Arbora Culture  
DISA Tower

Park of Drago de Icod

El Guincho Natural Swimming Pool

La Orotava Botanical Garden

Cape Verde Seashore

**TELLURIC LANDSCAPE**

Music Palace

Athletic Insular Stadium

Arrecife Auditorium

**RECYCLE, REACTIVATE, REGENERATE**

El Tanque Cultural Space

Berlin Floating Swimming Pool

MM House

Aliseo Social Building

Szczecin Maritime Museum

# 06.21.12.Madrid



[FM] Fernando Menis [Q!] Inma E. Maluenda & Enrique Encabo

## PLACE

**[Q!] If we look at your career, for the most part –except for the pools in Berlin by Artengo Menis Pastrana with Salinas+Wilk, a building in Sintra, as well as other projects in Taiwan and Cape Vert– your work is focused in the Canary Islands. How important is it for your architecture to be rooted in its place?**

[FM] When I was studying in Barcelona, I learnt that you could not design a building without studying the environment, or without bearing in mind small-scale urbanism, the place itself. With each construction an opportunity arises: to improve the environment. For this, it is essential to know the place thoroughly; is it cold or warm, does it need ventilation or not, is the country industrialized or not, what technology or politics does it possess... These are multiple layers that, once fitted together, result in the emergence of what I call “diplomacy”, which I understand as the process that blends form and function, reason and emotion, to transform them into intelligent architecture.

**Would you say your architecture is, to some extent, indigenous?**

I do not think so. My working method is always the same, regardless of the location. My architecture is integrated with the landscape, whatever it may be. We are currently working on the Jordanek auditorium (in Torun, Poland), where we have also learnt that the conditions vary, like needing glass to capture light where somewhere else you would look for shade, yet one uses the most common materials of Torun, the red brick, which is what gives identity to this historic city. The most difficult challenge when building in so different a context is to change your own thinking and understand how to move from one culture to another. I sense that architects who build continuously in very different places come to assimilate simultaneously in the broadest sense multiple cultures. Without reaching a

deep understanding of the place, I think it is unlikely that a building can succeed, or the environment ends up destroying it.

**Having worked so long in specific geographies, you won a competition to design an auditorium in Torun, which you mentioned before. How did you deal with this experience, this change in context so distinct from the Canary Islands?**

It was not the first time I had worked abroad, I had just arrived from a very enriching experience in Taiwan. Also, Torun is a Teutonic city declared a Heritage Site. To know the city in depth it is necessary to understand its origin, history, and visit the ruins at the Knights Castle, from the thirteenth century, in which you find brick-based mortar and stones, almost a Roman conglomerate, which gives you a clear idea of materiality. And when you walk into the churches one is aware of the importance of the glass due to the lack of light. All these details allow you to analyze and obtain clear signs of their culture; in this case, one of the most important issues to understand was the importance of the interiors in relation to the outside due to the bad weather, seeing that the separation between the inside and the outside is usually double. In Spain, however, hallways are a continuation of the exterior, to the extent that such transitional spaces must be vast and generous. I believe therefore that we have been able to include these situations in order to work in a consistent manner with a context and make decisions that surely we would not have used in other latitudes.

## **ECOLOGY**

**Of course, to talk about the landscape and the relationship with the place led us to consider the working relationship with the medium and how to negotiate the existing. How do you understand the aspect of “ecology” in your architecture? Is it a key in your studio’s work?**

Rather than ecology, in our work we have always been very conscious of comfort. Returning to the parallelism that I mentioned before, while in the Canary Islands it is pointless to install windows that cannot be opened, as weather permits this throughout the year, in very cold places the idea of comfort is associated with protection, almost isolation. In our case, I think that without being too aware or overly pending, we have always worked for the buildings to be healthy –from the understanding of nature– and comfortable because we are interested in the user and therefore the adequacy of the spaces. We were ecologists without knowing it.

However, while ten or fifteen years ago in the studio we gave no priority to saving energy except for the use of natural ventilation, always present in our work, we now understand that it is absolutely essential to design sustainable solutions to ensure buildings have low consumption. This idea also adapts to our involvement with the indigenous, because we always end up using local materials that determine the materiality of our projects. In Poland, in fact, we have used the local brick and woodwork that responds perfectly to its climate. Before I make constructive decisions I normally visit the surrounding areas in order to see what materials are to be found and how the factories and trades work with them. I think this attitude helps make less mistakes and that all may be coherent, better adjusted budgets, and ultimately, be more respectful towards local nature.

Arguably, therefore, our understanding of the ecological is anti-technological. This does not

mean that if a soil has its own energy I will not use it to my advantage. So that ecological understanding is used in a comprehensive manner, in relation to the environment, to solve and contribute to the strength of the project and ensure the buildings, as I said before, are healthy.

## CRAFTS

**I have always confessed a major interest in the crafts, “almost artisan-like”.**

**How does one structure the transition between a very personal creative process, as could be your clay models, and the construction of your buildings?**

It is true that I am attracted by the manual process, in particular flexible masses. When choosing a material for making models, the project tends to adopt the geometry of this material. But when using a flexible mass, ductile, the building can accommodate to any volume or surface solution. Thus, rather than craft-like architecture, I would say that what identifies us is the building of planes with a strong involvement of the hands, although when proceeding to the construction process they can be perfectly standardized and technologically advanced. While clay allows me to innovate through the forms, innovation supports all my work.

**One of your latest works is a ring you designed for ARCO [the International Contemporary Art Fair of Madrid] in 2012. At the same time you were building the big auditorium in Poland. How does the change in scale affect this craft-like attitude?**

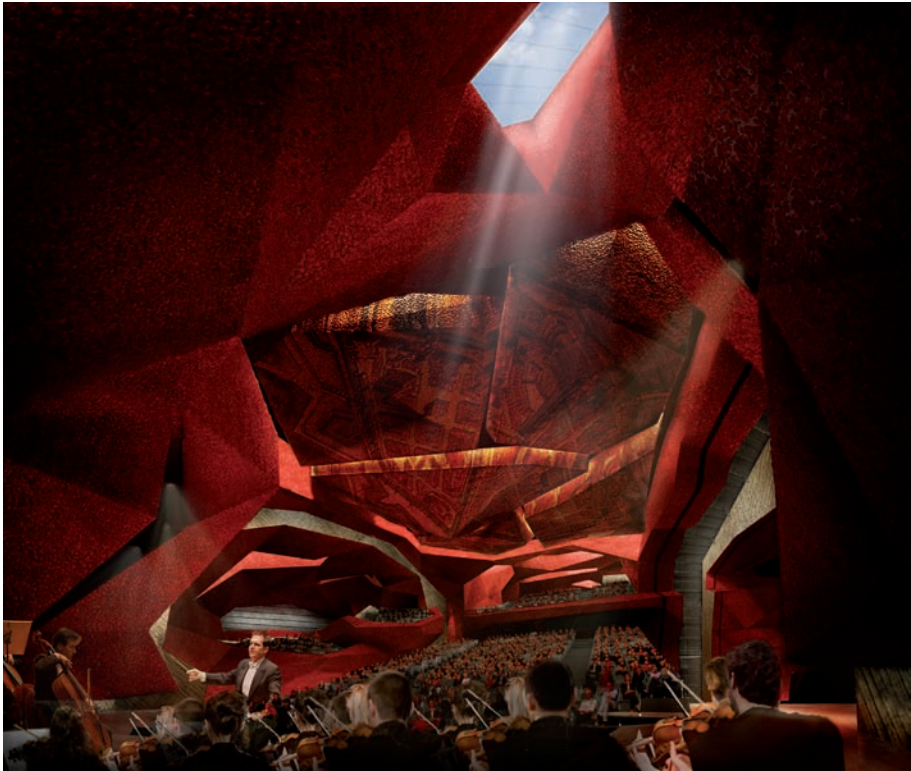
The experience of the ring links with our tradition of making models... in fact, the ring seems very like a model. So, ultimately, it was about building a model with a kind of concrete and dimensions that do not exist in the market.

It is true that the scale can mislead in advance, and in the case of ARCO it was an enormously complex project despite its small dimension. After developing it during four months and just one before the opening, almost all the rings broke. This crisis forced us to perform many tests in the laboratory until we learnt how to properly use the separators to prevent cavities, because with such small dimensions it seemed impossible to vibrate the concrete. We tested all alternative systems of vibration: from mobile phones to the electric toothbrush... until we found a vibrator so small that the structure worked.

## MATERIALITY

**Many of your buildings emerge from the earth, they are telluric and stony... but your architecture is always very physical, very materic. How do you understand the idea of gravity in architecture?**

I am interested in timeless architecture... I mean the architecture of ancient times whose performance is unchanged over the years because it is always in the present. If we consider gravity, we find that the Estadio Insular de Atletismo [Insular Athletics Stadium] in Tíncer (Artengo, Menis and Pastrana, 2007), for example, is really heavy and yet. When you are inside all that sense of gravity becomes light and clear-cut outlines. The Torun auditorium is also heavy, and yet the massive interior experience is so strong that it also becomes an exercise of weightlessness. This contrast is so tremendous that it gives you the feeling that apparently something should fall down, and yet it is unreal. If you do something that looks like an aeroplane, the fact that it floats feels quite normal...



Nowa Sala Koncertowa na Jordankach. Torun, Poland

**Would you say you are an architect of a single material? Why do you work with a palette of materials that is so restricted?**

Because I believe that the resulting space is much more clear-cut, more understandable and even more comfortable. When searching for harmony it is best to play with a single material: the landscape is more serene. We were talking about this earlier... if you work in a historic city with the same materiality, continuity works to transmit comfort and safety.

#### **ATMOSPHERE**

**In many of your projects, as with the cultural space of El Tanque [The Tank], La Laguna church and the retrospective exhibition of your work *Razón y Emoción* [Reason and Emotion], there is a clear interest in incorporating perceptual resources such as *chiaroscuro*. Where does this almost scenographic understanding of architecture derive from?**

A space with a very filtered light, very controlled, facilitates introspection, reflection: the search for the self. In many spaces it is necessary for you to concentrate, somewhat isolated from other people and your context... To achieve this serenity and concentration



other resources can be used in addition to darkness, such as using a narrow entrance, with an access that only lets you enter one by one. Such situations of expansion and compression offer a good opportunity for architecture to create a determined spatial experience, almost scenic... and often spiritual.

**How important is the length of gestation and construction of a project in your work? To what point does it influence you?**

Time is decanted in what I earlier called "layers". But their capacity to influence and their importance in each project depends largely on the ownership of the commission, ie, whether it is for oneself or for a client, as well as nature and typology. If it is an opera house, a typology that generally assumes a symbolic role in a city for hundreds of years, or a multifunctional building, equipped with services, there are many factors that the client must determine, such as investment, management capacity, functionality and programme, the public character, type of user, etc... This leads to a longer process in time that must be studied in detail and on occasions much debated in society. Because architecture is for society and should always respond to social demands.

**PUBLIC SPACES**

**In your career your public buildings are clearly distinguished, such as the Magma (Tenerife, 2005) or the churches in Adeje (2008) and La Laguna (2010), and public spaces, like the Cuchillitos de Tristán park in Tenerife (2005). How do you understand public architecture? How must it be redefined from now on?**

In my opinion, economic times have changed with respect to previous decades, and will not return. It is important that this change is assumed by all. Now it is obviously the time to rehabilitate rather than construct new buildings, and public architecture cannot be exaggerated... But do you not agree that if the boom were to return and we had twenty good years ahead we would return to as we were? I do not want this idea to be misunderstood, but I think of great patrons like the Medici, who pushed to build a great city because they had money and wanted to support the arts. The great works of history have been made in the great moments of economic prosperity and splendour. So, history determines when is and when is not the right time... we have to adapt all the time. But when you can aim high and the chances exist, you have to plan major projects that can be central to the history of cities.

**When do you think something becomes architecture?**

Whenever I feel a special feeling in a place, for me this is architecture. Certainly, seen from a broader and rational perspective, I would also say that there are buildings that do not excite me but are also architecture, distilled with knowledge and intent, that is, they go beyond the mere boundaries of construction. But not all buildings are architecture... there must be something more. And not all architecture is good architecture.

**RESEARCH**

**What percentage of time is devoted by your team to research? At what stages?**

For us, all is research... we are always building prototypes. In our studio, each project involves an investigation whose character and intensity responds to the complexity

and realization required. With Magma, for example, we studied how to address multifunctionality: using mainly a common area and reducing the private. In other cases like the MM house (Tenerife, 1999), my own home, the staircase, built with a recycled pipeline from an oil refinery, hangs seven floors and weighs 65,000 kilos. This water pipe system is also applied to the façade by means of a hinge that allows movement: a low cost *brise-soleil*. The Torun auditorium is also an impressive research exercise, but in this case very focused on the acoustics, although the most visible is the treatment of hammered concrete. So, I think I could summarize that in all cases we focus from the beginning on investigating how the material interacts with the shape and location on site.

**Speaking of materiality, do you understand architecture exclusively as something that is built?**

Certainly I like to take the paper through to reality. Maybe I am spoilt, because I have been fortunate to build a lot... I understand architecture as what I see and what I feel; if I cannot experience it, I would say it is not architecture. However, I think of some mythical projects such as the Total Theater by Gropius (Berlin, 1927), so well conceived and determined and so strong and intense that I also understand them as if they were built. So in all these cases, although they have not left the paper, I also consider them architecture.



Magma Art & Congress. Adeje, Tenerife



# RCR

## Aranda Pigem Vilalta arquitectes

Architects Rafael Aranda, Carme Pigem and Ramón Vilalta began their own studio RCR arquitectes in 1987 in Olot. They received the National Award in Architecture in Catalonia in 2005 and are Chevalier de l'Ordre des Arts et des Lettres of the République Française since 2008, Honorary Fellows of the American Institute of Architecture (AIA) since 2010, and most recently they earned the International Award 2011 'Belgian Building Awards'.

Since 1989 they have been architectural consultants to the Natural Park of National Interest, in the Volcanic Zone of La Garrotxa. During their careers they have tutored in Urbanism (1989-2001, Vilalta) and Studio Projects (1992-2004, Pigem).

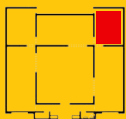
They have won various international competitions (the most recent, the Condal linear park in Barcelona, the Waalsekrook mediathèque in Belgium, the Soulages Museum in France, the crematorium of Hofheide in Belgium and The Edge Business Bay in Dubai). They have received various distinctions for their work (most notably in the European Union Mies Van der Rohe awards, in which they were three times finalists). Several of their works have been exhibited at galleries such as Toto Gallery, Ma (Global Ends). Furthermore their works have been published in noteworthy architectural journals such as *AV 137*, *El Croquis 138 (V)*, *RCR Arquitectes 2003-2007. Los atributos de la naturaleza* and "RCR" by *C3 Design*, Korea.

Architects  
RCR Aranda Pigem Vilalta arquitectes

Collaborators  
Lagares, Artec3 Studio

Materials  
Corian, Screens, Video, Lagares WC

Approximate dimensions  
6 x 7.75 x 5 m



# RCR Architectes Universe, poetics and creativity

To innovate is to imagine what would suit a society, or what that society needs or lacks before it becomes aware of that need or that lack.

Before innovation come observation and analysis, but only if one has a deep knowledge of a society or group can one think on its behalf: this task must therefore necessarily be performed before the other objectives can be reached.

Innovation does not occur in isolation, but as a result of the joining together of different disciplines which can unite and give the best of themselves only after extensive examination. In architecture, innovation is often portrayed as something superfluous, perhaps merely something linked to design. But we shall only have real innovation if it is also at the origin of the concept, in the programme itself and in the material and the construction techniques; we shall only have it if it is present from the first moment, when the need becomes a question to answer, and if that question is considered by all the participants in the answer. Only something which improves a person's experience qualitatively can be really innovating.

We should understand, therefore, that innovation in architecture must desire and aim to accompany society towards its fullness, and this implies learning to re-establish the connection with what is essential. We work while thinking about mechanisms which will allow us to discover and project that essence, so as to re-discover it. The practice of architec-



ture provides one with a comprehensive vision and sensitivity which in turn impose on architects the responsibility of identifying, interpreting and applying their own instruments with which, according to each project and its peculiarities, to advance mankind in its relationship with itself, with the landscape and with society.

Architecture has an important role in the transformation of mankind in the community and has a close influence on our way of life, where we live and how we associate with one another and, in short, on many matters which are fundamental in the formation of the individual. We have for a long time been focused on the reclusive and individualistic 'I', in an artificial separation from the group which was the result of the so-called "need for privacy". If we wish to innovate, we must break through the rigidity of the walls that separate us, and insert ourselves into the consciousness of the group, into the landscape which we inhabit, so that we understand and so that what is essential again shows itself as a constant theme.

It is fundamental to understand that architecture is not an object, a hermetic piece which superimposes itself on a place; it is a system of spatial relationships. By spatial relationships we understand the whole: what is constructed, the landscape, the place, human beings, the programme... everything is fused together to give rise to an architecture that has taken root, an architecture which is a landscape.

The basis of relationships in architecture is found in permeability. Boundaries are overstepped, experiments are performed with depths, contexts are related to one another and experiences are shared.

The basis of innovation in architecture is, therefore, at the root, in a constructed philosophy of life.

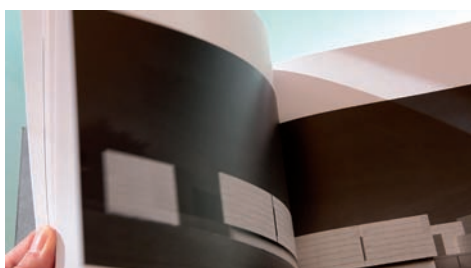
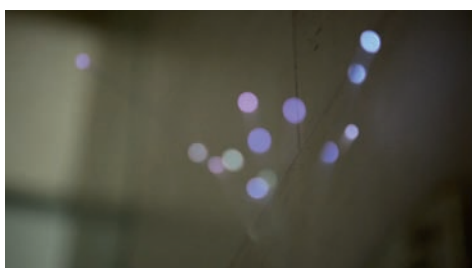
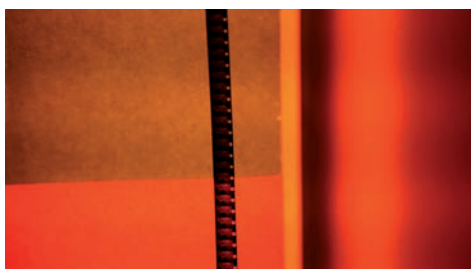
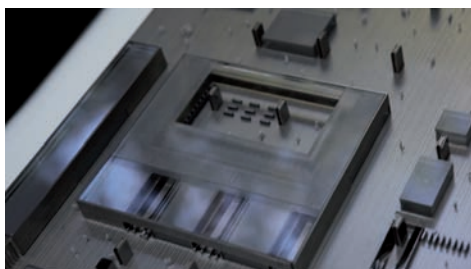
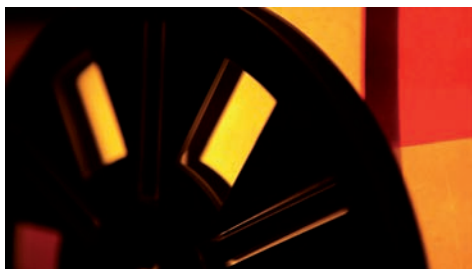
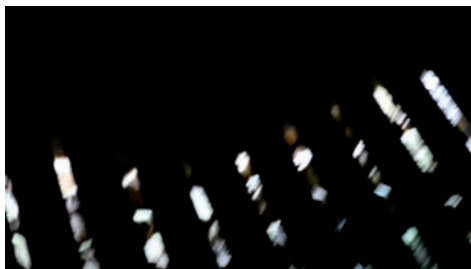
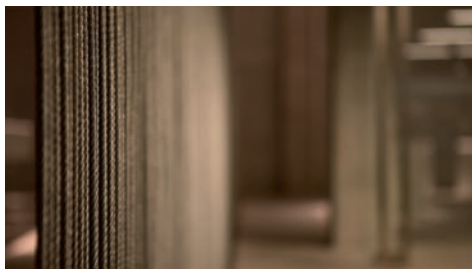
Innovation –or better, perhaps, creation– is what makes humanity progress, because everything, absolutely everything, is the fruit of creativity. Creativity is the ability to create: creation is making something out of nothing, producing something which did not exist before.

RCR Arquitectes & Ángela Moura

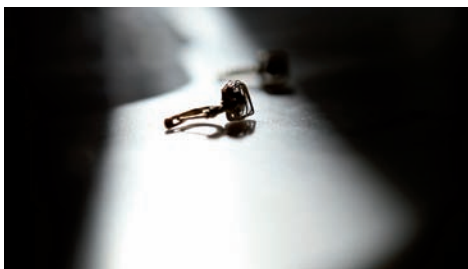
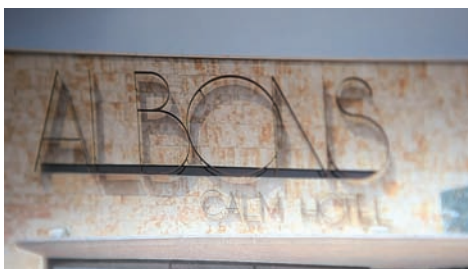
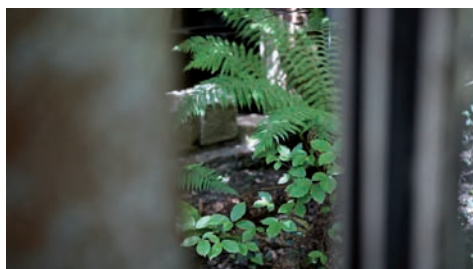
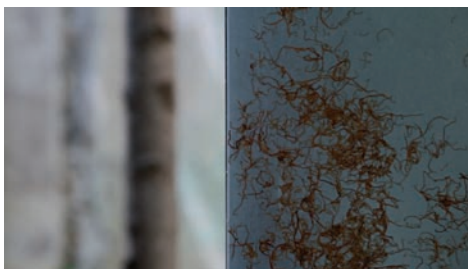
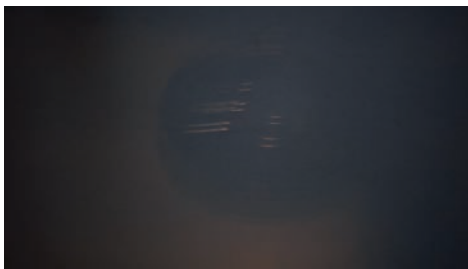








Stills from the installation video





1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999

BUILT WORK

COMPETITIONS  
1st PRIZES

RCR **ARQUITECTES**

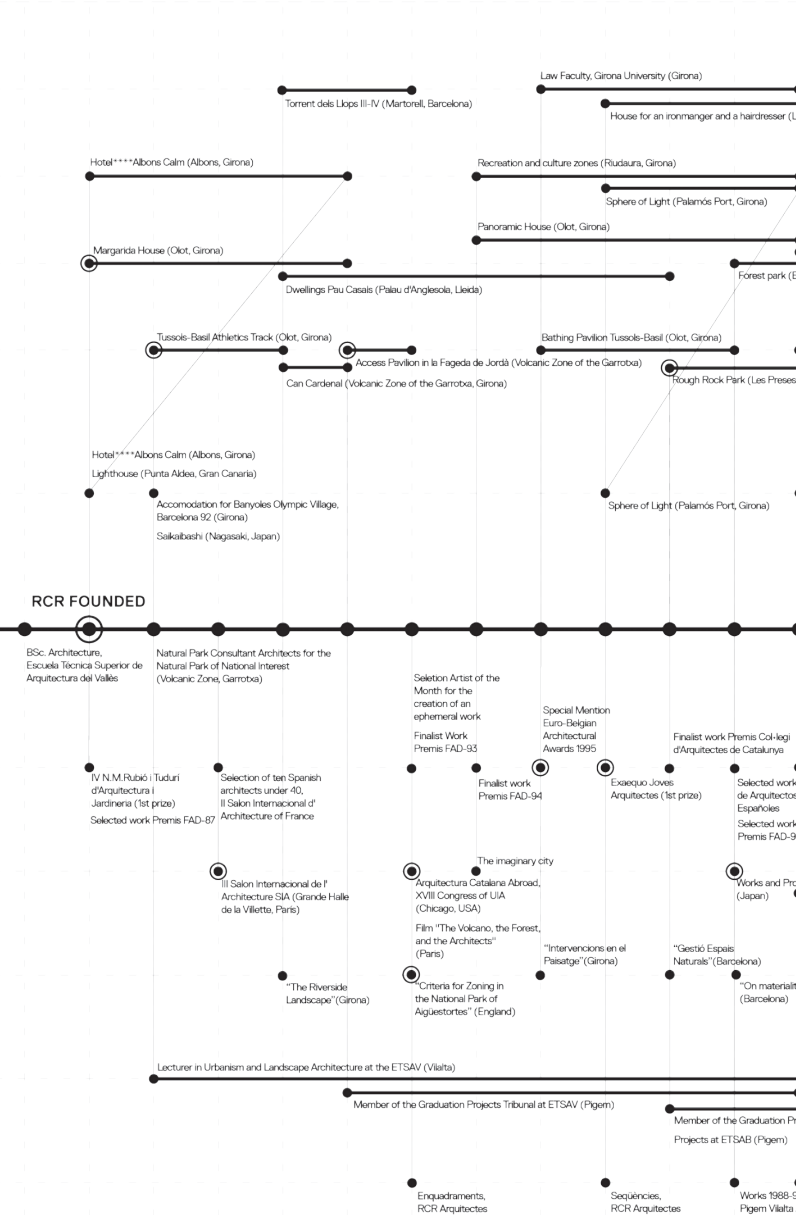
AWARDS

EXHIBITIONS

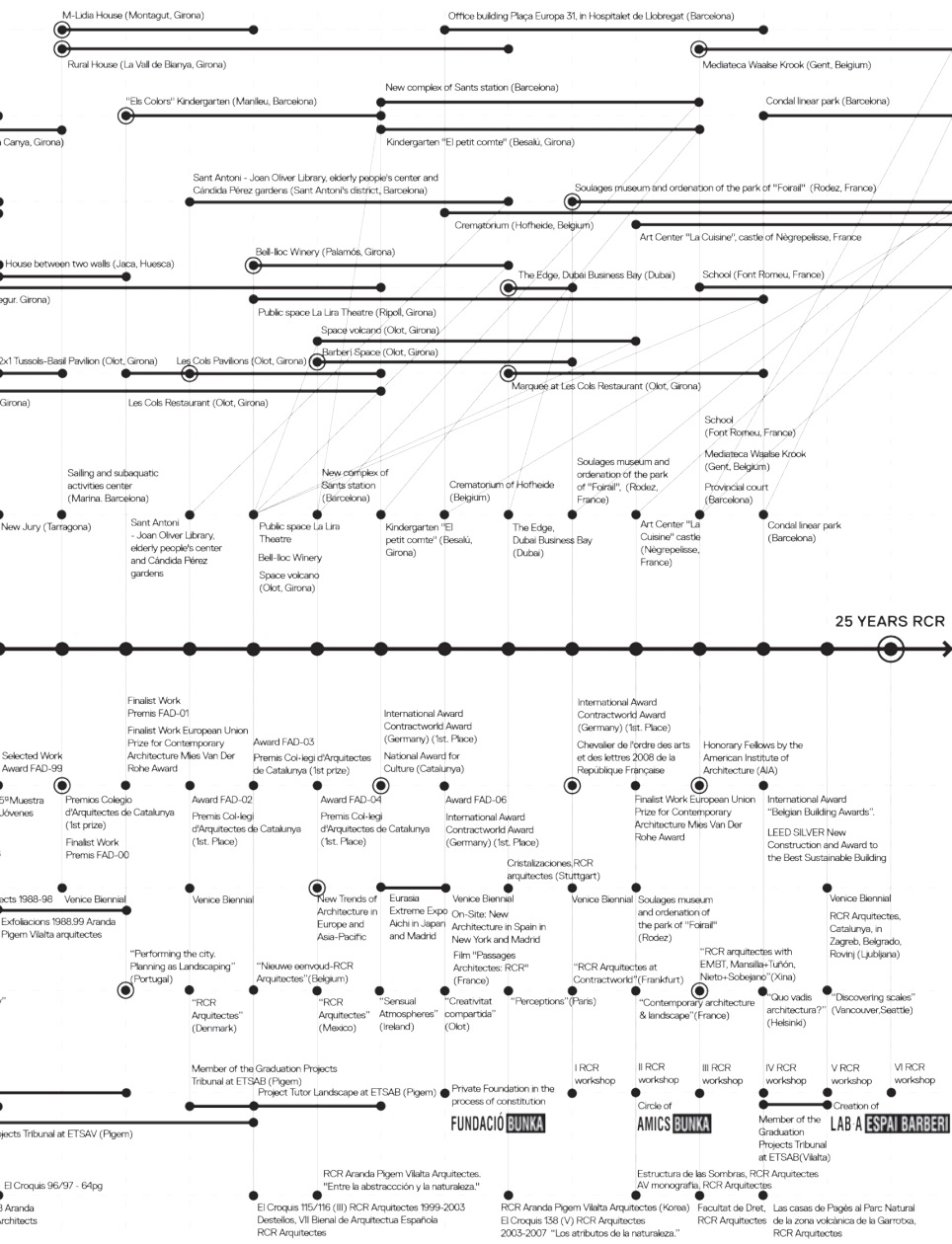
CONFERENCES

ACADEMIC

PUBLICATIONS



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013



# 05.14.12.Olot



[RV] Ramón Vilalta [CP] Carme Pigem [RA] Rafael Aranda [Q!] Inma E. Maluenda & Enrique Encabo

## SITUATION

**[Q!] For much of your careers you have created an entire body of work in Olot, to the point of modelling your own geographic space. How do you see your geographical links?**

[RA] We made the decision once we completed our studies. We returned to where we were born, where we had spent our childhood, precisely because we always felt that this place offered us a lot.

[RV] We did not doubt it. When you complete your studies, usually you wonder what to do with your future... it made sense to stay in Barcelona and try to start a more professional training in an architectural firm. But we had no doubts, we returned here.

[RA] At the time, it was almost a disadvantage to settle here, in Olot, because although we had assured a certain type of projects, they were not the ones we wanted. We have always lived with this duality. But the truth is that this place makes us see architecture in a particular way.

[CP] Yes, each place has to do with a culture, climate and many other things that then influence you as a person and obviously, influence your creative work.

[RA] In the decision there was something that is constant in our work, something irrational and intuitive which is part and parcel of our way of doing and understanding architecture.

## NATURE

**Your first published works were small accesses to parks and abstract pavilions. Even today, you have very few works located in an established urban area. Could you elaborate more on the relationship of your architecture with nature?**

[RA] The ETSAV-UPC [Higher Technical School of Architecture - Polytechnic University of

Catalonia] School of Vallés, where we studied, included a landscape architecture subject. At that time it was an innovative subject thanks to which we learnt to read the land, to recognize the strength of a particular place. And over the years we have gained the expertise in how to approach the site... to the point that proposals arise almost intuitively. [RV] This is a dialogue with the environment; it does not necessarily have to be in nature, it can also be with the constructed. The truth is that we are not very conscious of how we have developed this ability to capture the essence. As Rafael says, usually it is the very place that offers a very high percentage of solutions.

**You have rarely proposed anything with a direct formal reference to nature, I can only recall the Peralada wineries or the half-buried passages of the Piedra Tosca park... Do you understand your architecture as an abstraction rather than as a mimesis?**

[CP] It is important to establish a dialogue. The building or space you are going to build parts from the site, from nature, but then, once it is constructed, one cannot be understood without the other. It is about finding a balance, a symbiosis where the place, existing, and the architecture, built, can no longer be dissociated.

The Pabellón del Baño [Tussols-Basil, Olot. 1998], for example, is very horizontal, and behind it there are poplars of distinct verticality. So their disposition has to do with the management of trees. Now, in that landscape, the pavilion cannot be understood without the trees, or trees without the pavilion. In the end, thus creating a new unit, a new landscape.

**Were these pavilions an initial laboratory test?**

[RV] Yes, in that with them we found a way of linking the landscape without establishing a mimetic mechanism.

[CP] With them we also learnt the value of emptiness, of silence, and how it aids the interconnection with nature. And how in these spaces, not enclosed despite being covered, the presence of emptiness adds value to the defined area.

[RA] We also worked a lot with scale, because, despite being small pieces, they should have a good proportion, elegant and smooth... Materiality was another of the aspects that most concerned us in this relationship with the landscape and the function.

[RV] They were like exercises in which, in a not entirely conscious manner, we discovered the values of the vacuum and the built matter, the basic or primary duality of architecture. It was about working in the vacuum, with the vacuum, and without built matter you do not have that vacuum. The pavilions did not establish a contrast, but they themselves contained the vacuum.

[RA] This is the value of air... air as construction.

[RV] This issue has been recurrent in our professional experience, because the library of Barcelona [2007] is a building set between party walls in the Eixample, that basically empties out and breathes.

[RA] In all our projects the solid is as important as what is not.

## APPEARANCE

**Juan Antonio Cortés spoke of the laminate condition, not massive, of your enclosures [El Croquis 138, p. 5-24]. Works such as the pond pavilion in Llagostera, the tubes of**

**the Casa Paravent in Pals or the very recent Teatro La Lira public space in Ripoll. Is skin for you a profound element?**

[RV] Exactly, and the deeper the better. In fact, the thicker, the more space “is created” between exterior and interior. It is a concept that really interests us.

[CP] We understand the enclosure as a transition between what is outside and what is inside, and the challenge is how to develop it to create a link of some force. We avoid the plane that divides, only separates, and we prefer the ideas with flow, penetration, permeability. From here derives the term “laminated”. When we talk of thickness we are not talking about mass, but of the distance, like a piston, articulating the sheets that forge such separation, in which there is matter and air.

[RV] The concept remains the same when we were dealing with the pavilions and vacuum; to strengthen the dialogue capacity, but at another scale, that of the skin. For us, dialogue is established between equals; so we want to be blunt. There is no mimesis, but there is kindness. And the vacuum probably plays a decisive role. It is something that intertwines.

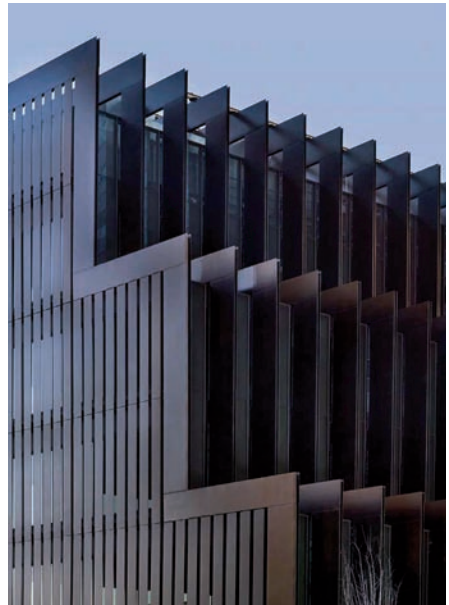
[RA] In the Plaza Europa office building in Barcelona, the façade is one meter of void. Therefore, the building is not just glass. And its relationship with the exterior is not established through a sheet of glass, but a deep space where there is shadow, where there are reflections. Here a person feels protected. Because it is a wall built out of space.

## SPACE

**The focused windows, like those of Casa para el Herrero y la Peluquera [House for the blacksmith and hairdresser] in the Canya, the abstract walls enclosing the pavilions in Les Cols or the vertical strips of your office building at the Fira de Barcelona**



House for a Carpenter. Olot, Girona



Plaza Europa Office Building. Barcelona

**[Barcelona Trade Fair] speak of a very personal understanding of the relationship between interior and exterior in architecture. Is your vision of architecture, even when you are designing a public building, intimist?**

[RV] Not exclusively. It is somewhat more complex. We do not work as with skin, instead, it is the initial concept that –through the process– provides a way to understand the relationship between the outside and the inside. Therefore, it changes according to the needs we believe each place has.

[CP] What we like to create are neutral spaces, with an interior-exterior relationship of certain qualities as well as atmospheric qualities, although this may seem contradictory. The adjective “neutral” should be interpreted in the sense that it is not finished, but is modified with the use, perception and movement of the people who inhabit it, who use it, who cross it or utilise it. In the end, it is important that people living in the space *activate* it. It is a creation of nature, almost like a forest... something meaningful for people when they cross it.

[RA] And searching for each individual's own emotion. It is true that we intentionally handle the idea of retreat. If we talk about the representation in your architecture, in all the images the atmosphere seems to thicken. Very few of your projects are photographed with stark contrasts of light and shadow. This idea of regulating the gloom of the interiors is often replicated in the external image.

**How do you intend light to relate to your spaces?**

[RA] We are interested in the atmospheres of emotion and well-being. The concepts of serenity, as well as balance, proportion or retreat are also in our work. And light participates in all of this.

[RV] If the fundamental duality of architecture is void and built matter, without light there is nothing. In each case, in each particular programme, we evaluate the kind of experience we seek; and then we make it more specific: whether skylights are needed, or rather an overlap between the views and light... It is clearly a basic element: void, matter and light. Everything is in there.

## **MATERIALITY**

**There is a strong link in your architecture with matter, you even speak of a strategy to exhaust the different registers of a material. That decision to be voluntarily restrictive is almost, perhaps, as crucial as the question of the geographical environment. You seem to search for an unlimited potential in this absence of variety. Where does this single-material decision grow from? (It seems a natural extension of the watercolours with which you begin your projects...)**

[RV] Exactly. The void is the white and the built matter is the stroke; in this case, it is a single material, but with many nuances... a gradation from white to black, with many shades of grey. To delve in-depth into a single matter is very interesting.

[RA] The goal is to create that atmosphere we mentioned. We choose very essential materials, without artifice, so that its tactility, its contact with each body, can be direct.

**Do you remember when you became aware of that decision?**

[RA] Many years ago.



[RV] Rafael has often said “we are architects of the old school”, in the sense of having learnt from the beginning to relate directly with the matter and crafts. Perhaps this is the advantage of being in a place like Olot. Unlike in the big city, we have always been able to enter the workshops to touch materials such as wood or stone, know how they work and what it feels like to be in touch with them and have 1:1 scale samples.

**Until the Manlleu kindergarten (interestingly named ‘Els Colors’) colour has been almost absent in your architecture. Is colour also in your case a material decision?**

[RV] No. Let’s say, as we have progressed, we have discovered how to work with the diversity of matter. From Els Colors kindergarten to more recent works, colours appear because we believe they are relevant to children.

To improve learning it is best first to master the essential techniques. As one learns, more can be mixed in. It is not entirely a matter of colour, but also relative to the materials.

## SCALE

**Until very recently you have worked with small-scale pieces of only one or two floors. Is your design process based in a bottom-up approach, where systems grow, or to the contrary, a top-down strategy that gets defined progressively as you zoom in?**

[RA] For us, first comes the concept of the building, and from what the building wants to be, the scale emerges, as does the light treatment. We understand it as another instrument. It is not something we reflect upon in isolation.

[RV] Back during our studies we learnt that it was not the same to design a chair or a landscape. There are clear differences between working out a detail or evaluating a territory, although the task itself is similar. The key is in the instruments that each scale requires: that is the big difference. So far we have not designed big buildings because we have not had the opportunity. But some years ago we had the experience of working in Dubai on a very large scale with a site of more than 600,000 m<sup>2</sup> for a population that was almost half that of Olot, I believe about 15,000 people ... and we did not feel lost.

[RA] All these years we have worked with strict dimensions: we know the difference ten centimetres can make... For example, the height of the porch of the Mirador house is 2.3 [meters] and the first pavilion 3.2 [meters]. And we know all too well the difference.

In fact, the problem is not to manage the large scale. We have always been fascinated by sites such as the Benedictine monasteries, because, despite being big spaces, they have a soul, character and their own personality. Moreover, I have never had a feeling like the one I felt visiting the interior of the Conques [Sainte-Foy] nave: there you are and you are very small. The space does the rest.

## RESEARCH

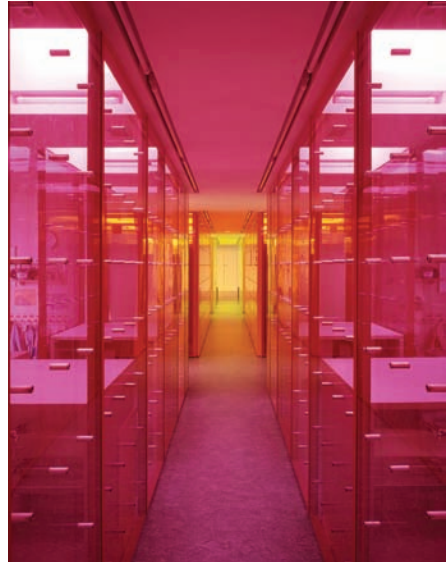
**Is research something that is built into your work from the design phase until the end of the project?**

[RA] Yes. And we have always understood it as a continuous path. Each project has given us guidelines for the next. We have never started anything out of the blue.

[RV] In our way of working there are two parallel tracks. We do not know exactly why, but we believe that we do not repeat ourselves, but that with each project we initiate an uncharted path which leads us to new possibilities. It is a continuous evolution,



Espacio Barberí. Olot, Gerona



Els Colors Kindergarten. Manlleu, Gerona

not repetitive. Moreover, since our studies our restlessness has led us to combine the profession with specific research processes.

Now, for example, we have just finished a book that came about many years ago when we began to study the masías [Catalonian farmhouses], a theme that we had experienced personally and wanted to know more about. These are initiatives that always move in parallel with the design process. Because we like that alongside our architectural activity other things happen that nurture us, that are of interest and contribute. This is the case with Espacio Barberí.

**Beyond a highly directed architectural exercise and such care for detail with which you build your projects, do you seek the artistic condition of spaces?**

[RV] Yes, because we believe in beauty and understand that architecture is not only a space "to be used".

[CP] ...but for pleasure.

[RA] ...and for self-absorption.

[RV] Art has always surrounded us... we have had moments here at the office, where we had more art books than architecture on the table. But these are two disciplines we do not wish to confuse.

**Does architecture have any sense if is not built?**

[RV] Specifically, in our case we understand architecture as a constructive development, although arising from imaginative ideas. To stay only in the world of ideas... I do not think we have ever done this.

We have been working on a book for fourteen years. We had in mind to complete it one day, because we do not like to leave things unfinished. Once you have accepted and committed to something, it is important to give it life and finish it. And as architects, we believe this implies having a physical condition.



# Enric Ruiz Geli / Cloud 9

Enric Ruiz-Geli is the architect of VillaNurbs, Media-ICT, el Bulli Foundation, The Millennium Project, VillaBio, among others.

His Project Hotel Forest belongs to the MoMA collection. His project New York Aquarium Project belongs to the FRAC Centre Collection (Fonds Régionaux d'Art Contemporain).

The Media-ICT has been awarded 'The Best Building of the Year 2011' by WAF (World Architecture Festival 2011). Media-ICT is a Net Zero Building, built at a construction market cost of 1.300 euros/m<sup>2</sup>.

Enric Ruiz-Geli has created 6 patents, around the living lab VillaNurbs, from 2002 until 2011, as a masterpiece of Digital Fabrication.

Enric Ruiz-Geli has lectured and collaborates with a map of labs such as Angewandte, AA, UCLA, Art Center in Pasadena, CITA, RMIT, MIT, Bartlett, ETHZ and the IE School of Architecture among others. Cloud 9's agenda is to look at PILOT Projects in global warming scenarios.

Enric Ruiz-Geli is master unit at the AA, where he focuses on this global warming scenarios research towards a green agenda. Cloud 9 has signed "knowledge contracts" to transfer the Media-ICT knowledge in Taipei, Kuwait, Moscow and the Organization of Eastern Caribbean States.

Enric Ruiz-Geli belongs to the Advisory Committee of Tecnalia, Inspiring Business.

Enric Ruiz-Geli belongs to the design team led by Jeremy Rifkin to develop the TIR (Third Industrial Revolution) in cities.

Enric Ruiz-Geli and Ferran Adrià are creating the elBulli Foundation as a living laboratory in Cap de Creus.

Enric Ruiz-Geli has led The Millennium Project in Valladolid, with an urban retrofitting project, using for the first time ten urban wind turbines.

## Architect

Enric Ruiz-Geli

## Team

Mireia Luzárraga, Edouard Cabay, Pablo Ros (head office);  
Víctor Llanos, Joan Escanelles, Albert Cuesta, Víctor Molina,  
Mila Moskalenko, Marga Ruiz, Aurelio Dorronsoro, Konrad  
Hofmann, Nora Graw, Samer Yamani (project architects);  
Carla Bach, Victor Comeche, Marcos Zaragoza, Marta Arranz,  
Alberto Delgado, Cristina Mas (collaborating architects)

## Archives

Mireia Pallarés, Juan Ávila, Elena Herbas, Pep Bou

## Design and Build Labs

Luis Borunda (KTH School of Architecture), Yana Petrova  
(MILGAiK), Georg Ladurner (Faculty of Architecture  
and Urban Planning), Fernando Sánchez (IE School of  
Architecture and Design), Daniel Christiansen (Architectural  
Association School of Architecture), Selim Halulu  
(Architectural Association School of Architecture)

## External collaborators

André Macedo (graphic design/multimedia), Appareil  
(Edouard Cabay), ON-A (Jordi Fernández, Eduardo Gutiérrez),  
B.O.M.A., PGI

## Materials used

Ceramics (Toni Cumella), glass (Cricursa), polyurea  
(Tecmolde), polyamide models (Materialise), rocks (Cap de  
Creus), structure & assembly (BEC), audiovisuals (BAF),  
wood (Diorama)

## Advisors

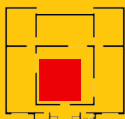
Toni Cumella (Cerámicas Cumella), Julio Luzán (Tecmolde),  
Ferrán Figuerola (Cricursa), Materialise

## Approximate dimensions

6 x 12 x 4.6 m

## Research Techniques

CAD-Cam, Parametric Design



# It's all about particles: elBullifoundation

## Particle Architecture Thesis

1. The architecture of Cloud 9 is articulated transversally by particle theory, from the visualization of landscape –as a global concept, the sum of space plus social relationships– to the design and construction of the architectural project.

2. This theory interprets reality at the level of the particles which provide it with information, designing strategies over time for the interpretation both of the tectonic or material (territory, buildings, people) and of the climatic or incorporeal (light, temperature, relative humidity, rain, wind, salt, CO<sub>2</sub>, photosynthesis).

3. Using 3D laser scanning technologies (Tecmolde), capable of recording 120,000 points per second at a distance of 75 m, point cloud files that can be managed by 3D software, and sensors installed in the location (Tecnalia), together with those that gather information about climatic characteristics, the landscape is recorded



as particles, and not as geometric locations or simply as numerical data.

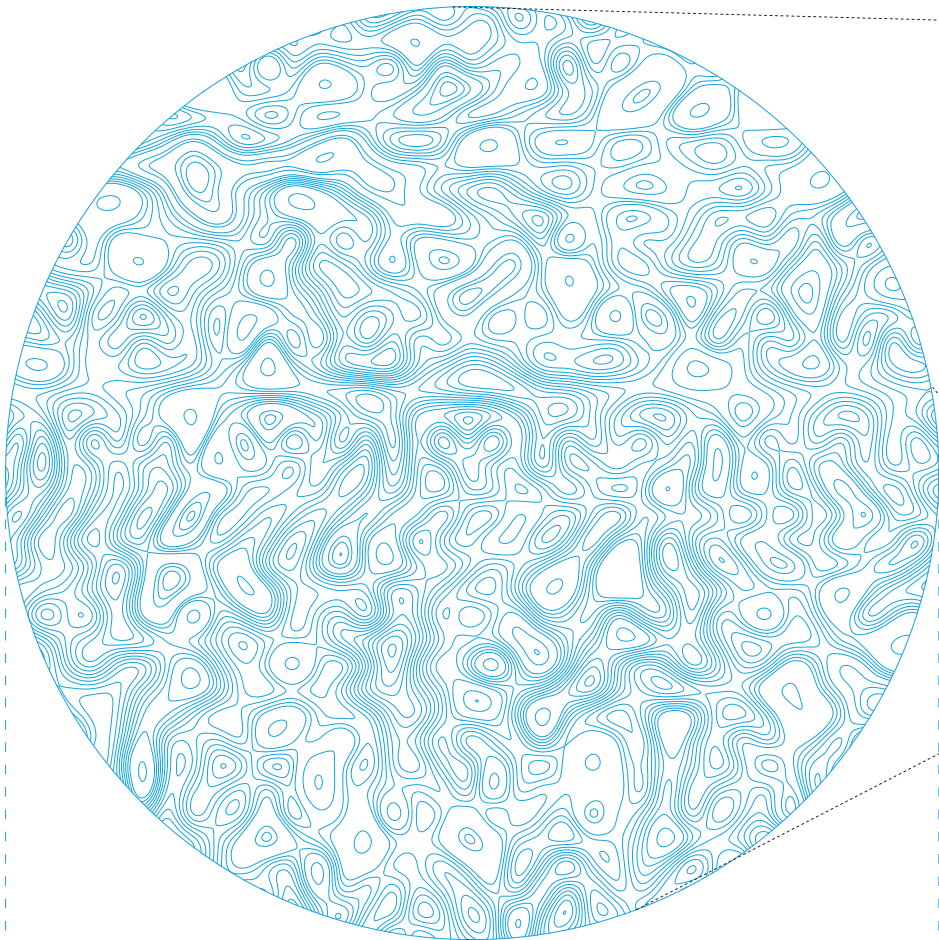
4. These particles reproduce, in an abstract manner over time, a given condition of a given landscape. So this reproduction, even though abstract –an indispensable condition for the architectural project– maintains a direct link with the territory which in turn enables the project to be understood not as a graft from outside, but, rather, as an internal emergency.

5. The natural environment for working with particles surpasses proprietary software, and introduces environments that are more generic. They are managed by the use of free programming environments (Processing) through intelligent behaviour over time, thus progressing from the exterior morphology of the project to the performance of its parts or internal composition.

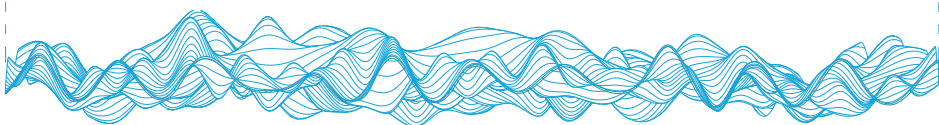
6. Work with particles, being connected with the technological development of manufacturing methods (Materialise) through techniques of rapid prototyping and numerical control, allows not only formal development but also direct transposition from the plan to the construction.

7. In this way, Cloud 9's Particles Architecture becomes part of a discourse that makes no distinction between objects and products, buildings and landscape, sea and mountain, but which understands reality, and therefore the architectural project, as performing particles, thus entering into an empathetic understanding of a society in which human beings and Nature speak a common language, that of Particles Architecture.

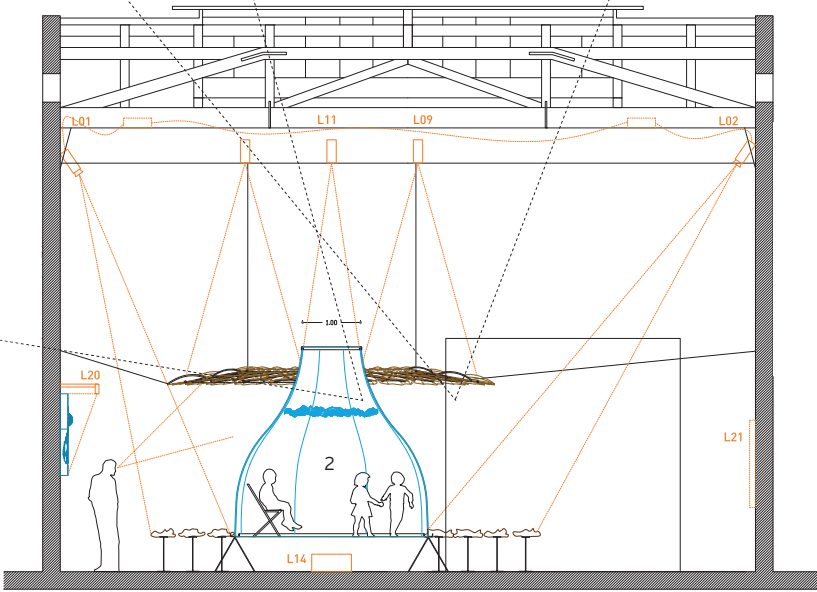
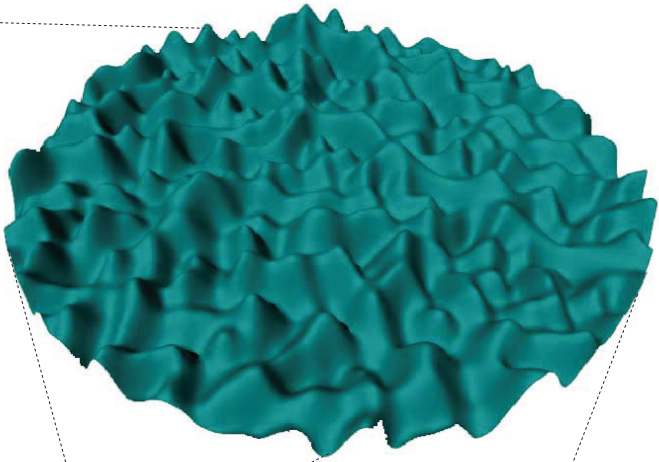


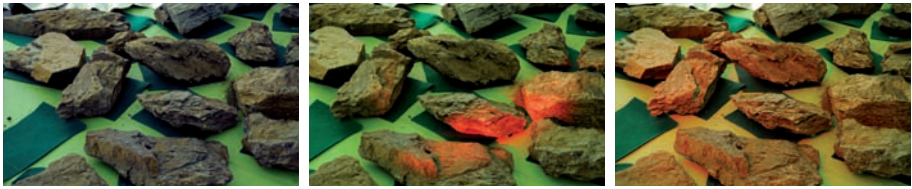


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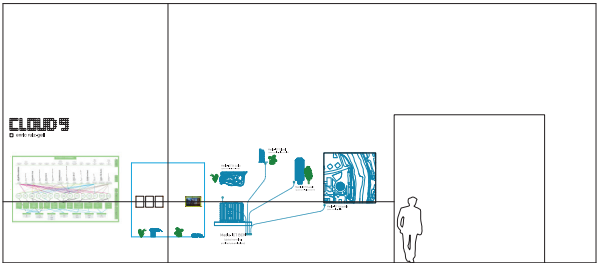


- 1. False interior ceiling forming landscape of the Cap de Creus and made from a wooden mould constructed using a numerically controlled machine and sprayed polyurea, forming a blue cloud (Tecmolde)
- 2. Bubble elBullifoundation scale 1/1.5. Non-transparent glass, with salt (Cricursa)

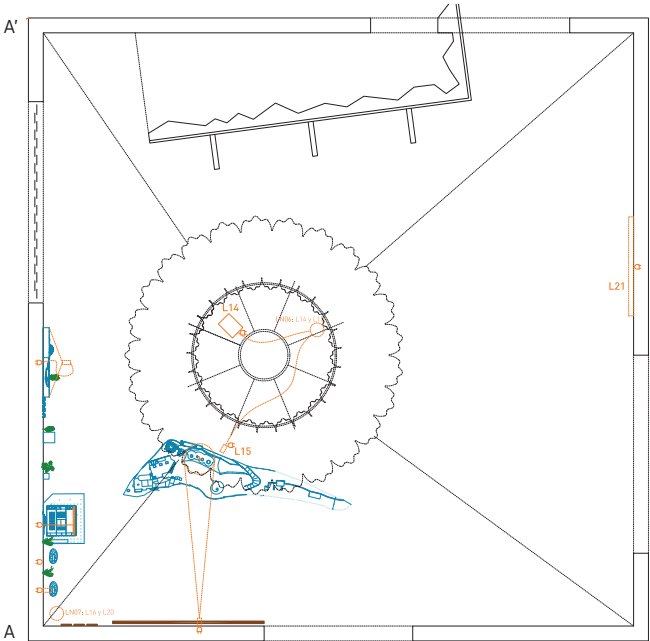




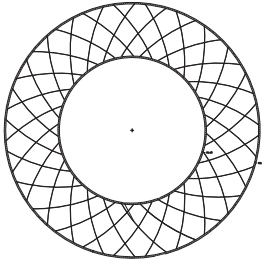
Red spotlight to simulate the effect of sunset at the Cap de Creus (BAF lighting) . 0 / 500 / 1,000 w



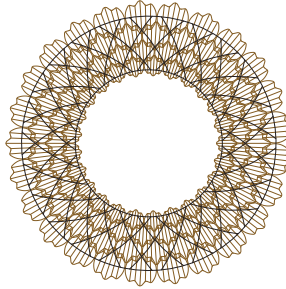
Interior elevation AA'



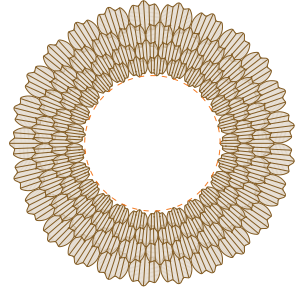
Floor plan of the installation



Hung ring  
Positioning of the first glass



Positioning of the other glasses



Extraction of the structure which supports the ring



row 01  
25 pieces



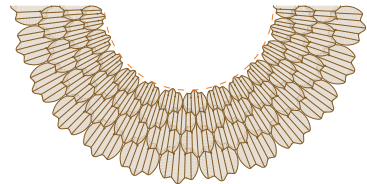
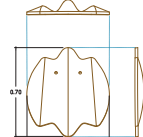
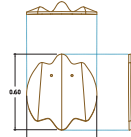
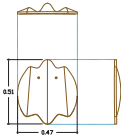
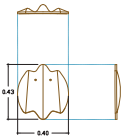
row 02  
25 pieces



row 03  
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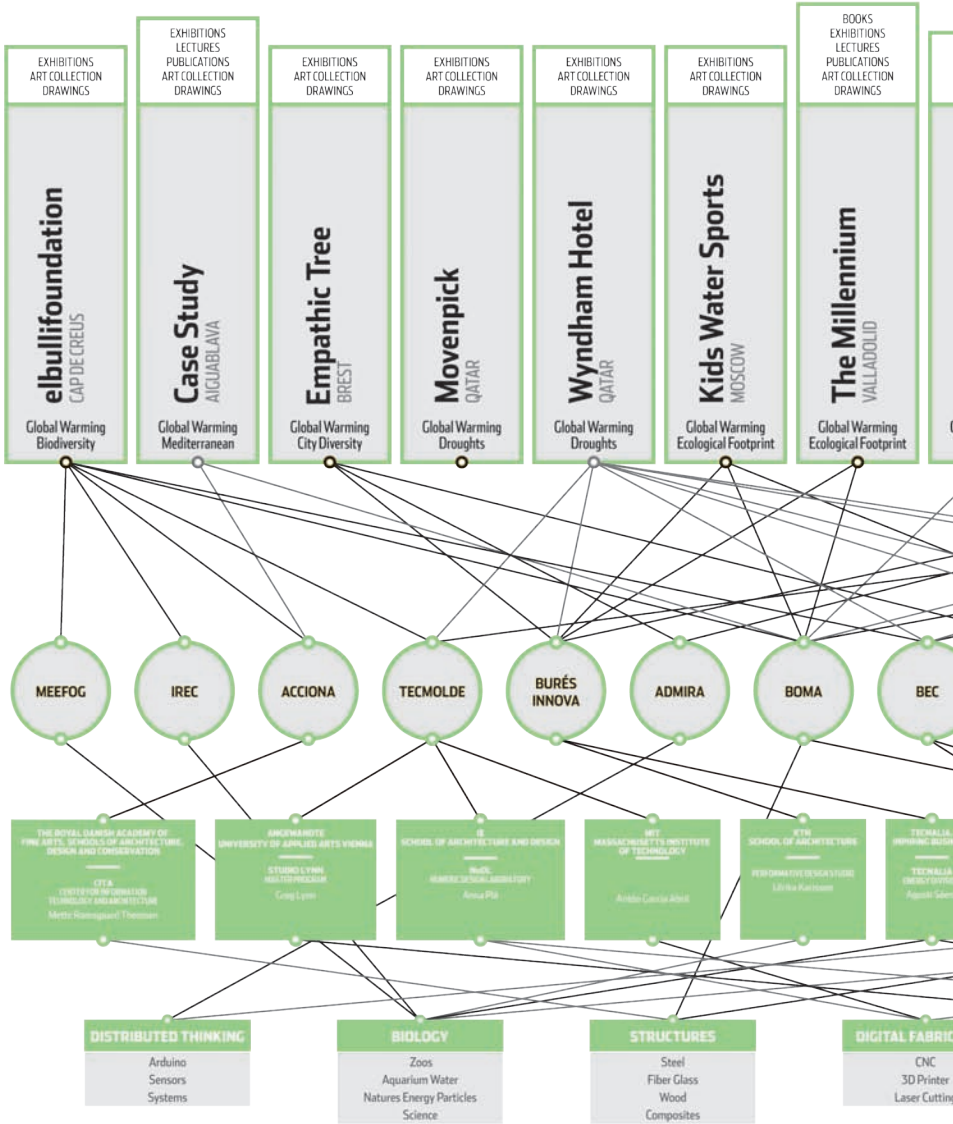


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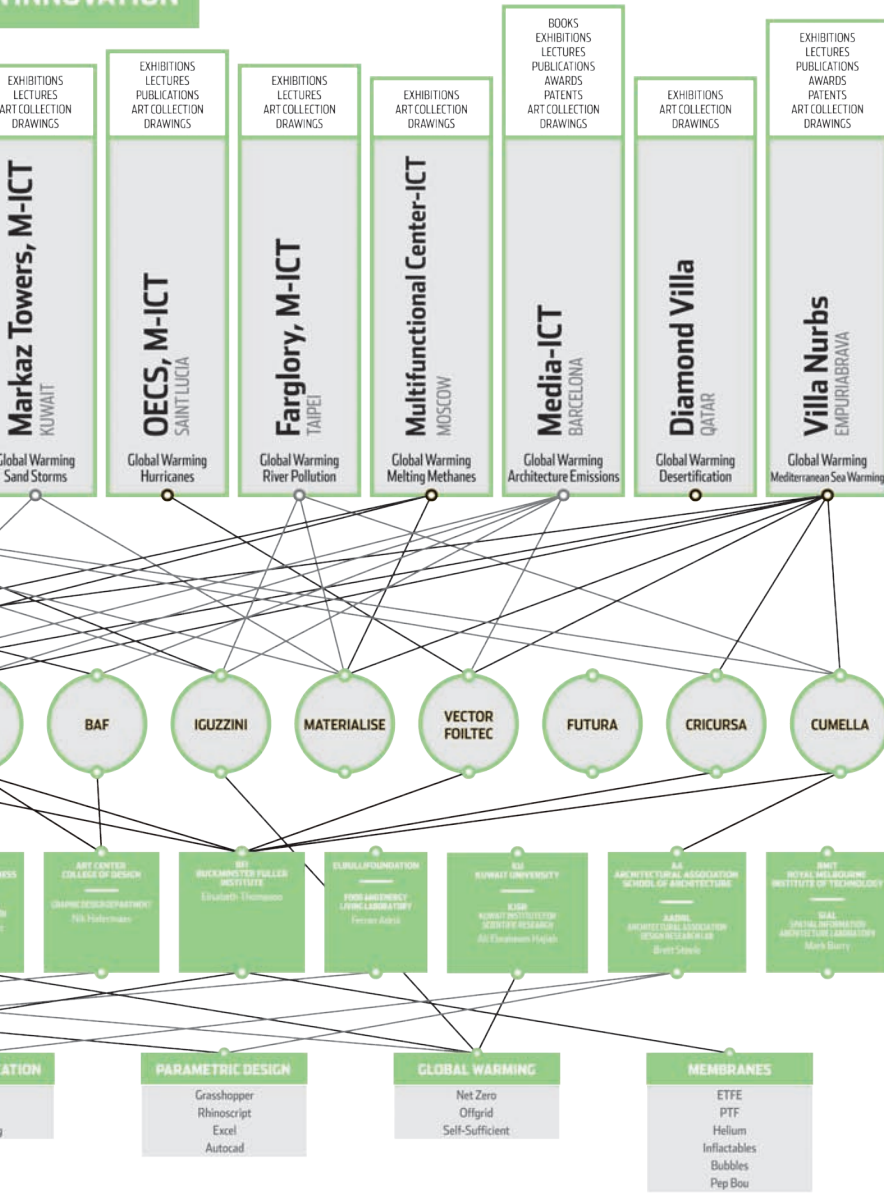


Pergola outside the bubble, so that on entering the bubble one perceives a sky of 3D mesh, as big as the floor (Tecomolde y Cumella)





# INNOVATION



# 05.27.12.Barcelona



[ERG] Enric Ruiz-Gelí [Q!] Inma E. Maluenda & Enrique Encabo

## ECOLOGY

**[Q!] “EEE towards E: Energy Ecology Experience towards Empathy” is the title of one of your articles. We propose reviewing one of these terms: ecology. When does this concern arise in your work?**

[ERG] When I met Jeremy Rifkin. In 2005 we won the New York Aquarium and came in contact with Nicolai Ouroussoff, the critic of *The New York Times*, who showed great interest in Villa Nurbs, to which he devoted seven pages in the Sunday supplement. At that time, we had been in contact with Rifkin for almost two years. After being published he contacted us at the Naturaldia symposium in Chillida Leku, San Sebastian. I still remember he approached me and said: “Hey you, forty years old and with seven pages in *The New York Times*, what’s your game?”. After this episode, he called and invited me to participate in a workshop in San Antonio, Texas, to fight a nuclear lobby: against the idea of a public administration spending 18,000 million dollars to build two nuclear power plants. With Rifkin we managed to get half of the budget devoted to a project for a cluster of clean energy production. So from him we learnt about this attitude of the coexistence between ecology, activism and economy; he who has 120 companies supporting the New Green Deal, and in particular the concept of ‘Green’. Right now the Global Green Growth (GGG) needs to be launched: to act globally, to produce “green” and create a “green” based economy.

## ECONOMY

**What paradigm is currently changing in world architecture? What is it that we knew and took for granted, but is now no longer valid?**

The undeniable fact is that oil is running out. Right now we have stock for between 40 and 18 years, according to estimates by the UN or Greenpeace. Obviously this is a door

that is closing, so the current economic model, based on these resources and supported by powerful lobbies, is already in the Intensive Care Unit. Right now we have to decide what to spend money on –because we cannot invest in two options– and whether it is worth keeping this scheme alive for three more years, or better to develop a new model of Global Green Growth. For example, two years ago, here in Barcelona the Nissan company announced to the government its plans to abandon the city, for which it received an injection of 80 million Euros of public money to keep working and capitalizing in car production, that is to say, in the obsolete oil model. Two years later, Nissan announces again its plans to leave. The opposite example: the Government of California, to whom they also announced they would leave, decided on another strategy: to offer all unemployed workers from the Nissan plant after closing free public university studies. In addition to this investment of two million dollars in public education, with the rest of the money they have built a small electric car factory with engineers trained at the public universities. And this is the future because it has created a cluster of innovation that has encouraged private companies to locate their electric car industries around this public initiative. It is about, therefore, two opposing models: one which is still in the Intensive Care Unit after more than two years, and another that is a model for the future. The new paradigm is to understand that we need to invest money in education and the public sector. More than ever, we should act in a socialist or even better, social and activist manner. Be a pioneer, take the risk. Cloud 9 has always focused its work in this way, developing proposals in risky local areas like Figueres, Empuriabrava and Valladolid, for example, where we have built the first project in Europe of an urban micro-wind turbine with ten mills: we have called it Millennium.

### **How is this paradigm shift changing architectural production systems?**

When we started with Villa Nurbs, eleven years ago, we understood that the milestone was not the finished building, but that each moment of the construction process was itself a milestone. At that time, we thought in terms of “scenes” that united knowledge and technology, such as wood formwork with the use of digital cutting machines, to convert the technology encapsulated in a patent. For Cloud 9 a patent is not a defense system of intellectual property against the possibilities of industrial production, but a sort of test or certificate of innovation. In fact, through a patent we know whether or not a similar system exists in Europe, so if the system is unknown, we find that we have managed to work in innovation, opened a new line of research and advanced the knowledge economy, which translates into economic value as Cloud 9 is worth six patents; in the market for innovation this translates into six million Euros.

### **One line of research in which you are currently working, within the concept of innovation, is the “architecture of particles”. What exactly is this?**

When I am in a sauna, my body is 80 percent water and space is relative humidity; in this context we are almost water, our pores open up, and between our body and air an exchange of particles takes place. This exchange is the “architecture of particles”. Another example: the main cause of climate change are the CO<sub>2</sub> emissions. Mongolia, due to global warming, is releasing methane, which is twenty times more polluting than CO<sub>2</sub>; this is the next planetary bomb.

If our planet is fragile at particle level, architecture must operate at the same particle scale to resolve that fragility. And here is the innovation. Because the difference in efficiency between one photovoltaic panel and another lies in the shape of the particles. If they are spherical, for example, the sun is always 90 degrees, which causes the plate to be 60 percent more efficient, according to Tecnalia.

### **Is this change related to the implementation of the “architecture of particles” at elBulli?**

In the nineties we learnt that the container and contents should move forward together. If we have to work with elBulli as content and the Natural Park of Cap de Creus as context, the architecture will have to balance these conditions. And if Ferran Adrià works at this scale and cooks with nitrogen, we cannot just limit ourselves to a concept of inner and outer space (door, window, ceiling or floor), but must lower ourselves to the molecular level, as we did with the cloud of the Media-ICT. In the first meetings, Ferran said: “If you build buildings with nitrogen and I cook with nitrogen, it will go well. We will understand one another.” And if I interpret the natural landscape of Cap de Creus, what I see and am interested in is the map of CO<sub>2</sub>, the salinity of the atmosphere, the geothermal, how the microalgae are cultivated... not a panoramic view. In fact, this landscape works in equilibrium through the particles, the relation between salinity and photosynthesis.

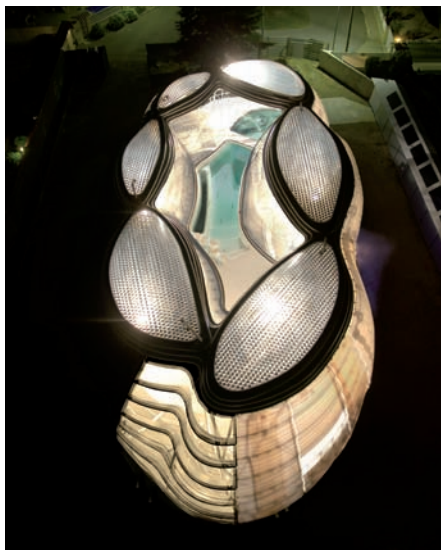
### **Can this strategic and analytical vision be maintained when compromising with the market place?**

Progress occurs precisely when you are in the market, not outside it. It is something I have learnt with SCBF and elBulli. The hard part is to be elBulli or Cloud 9 within [the market] and tell the construction industry how to advance, what are the lines of action... the future. It is similar to Tim Burton's attitude in Disney or Tesla in Iberdrola.

## **REFERENCES**

### **Throughout your professional career there are visible signs of characters like Pérez Piñero, Dalí, Gaudí, Buckminster Fuller... What role do these references play in your work?**

For us references are links. Bob Wilson [b. 04.10.1941 in Waco, Texas, director of opera, theater, choreographer, set designer and avant-garde artist] is one of my main references. Through him I met Gerard Portier, who in turn led us to the positive activist architecture of Paolo Soleri and his ideas on how to operate in the landscape... So it was that when I was but 26 years old we were discussing the Dantons Tod opera. This experience, creating architecture as one puts together an opera, is now part and parcel of my own work culture. Another of our major references along the lines of activism is the group Metapolis: in this group we learnt to go into the street and shout from the Mercat de les Flors or from the MACBA [Museu d'Art Contemporani de Barcelona]. And some media have portrayed me as “the digital Gaudí” as a result of calling the Media-ICT the “digital Pedrera”. The parallel is interesting, because just like Gaudí was a platform to develop all the crafts that existed in his time (metal, ceramic, wood, painting...), Media-ICT also acts as a platform for contemporary *crafts* (software, programming, robotics, clean energy...). Although the image has little in common, the operative coincides. Other links are so fast they do not



Villa Nurbs. Empuriabrava, Girona



The Millenium Project. Valladolid

fit in an interview, but the important thing is that in our studio students collaborate from institutions around the world, such as AA, IaaC, Angewandte, UCLA, CITA, RMIT, among others. I also encourage architectural firms to be more transparent in the construction and promotion of these maps of links to promote their knowledge and define their own profile.

## TRANSDISCIPLINARITY

**Another concept implemented in your work and that comes from the collaboration with Wilson is the idea of the group as a symphony of very strong individuals, rather than a collective work... How do you see the work of Cloud 9, individual or as a collective?**

Cloud 9 always has a common goal that is the center of everything. But each one of us is absolutely the author and their part is not bound to the rest. This is the theory of John Cage: to work with indeterminacy as a field. The structure moves in one direction, the energy in another and the cloud another... each one approaches the center in an individual manner, without hierarchies. And in the end we all meet to become one. So when it is time to build, everything is in balance. My experience tells me that from this individualism, with independence, you reach the collective.

**Would you say that your work with Ferran Adrià is from an independent individualism?**

Having two artists in a creative environment multiplies. It has been proven. Ferran is able to be open and transparent to us. Also from Cloud 9 we have been intelligent and effective in entering and absorbing much of his operating system of creativity and authorship.

## PRODUCTION

**In your view, how are the production patterns in architecture changing?**

Since the Villa Nurbs project we are building digital manufacturing maps. When we had to do the formwork, for example, after much searching we found a five-axis milling machine in Huesca, so we went there. It was the first time it was used.



Today Catalonia has sixty digital manufacturing companies. This means that the industry has changed, it has been digitized and the paradigm has changed. Before, in a factory like Montvaga there were fifteen welders and a boss who directed them; now, it is a team of information engineers above, and below just machines, cutting and welding robots. So the Media-ICT emerges in the Barcelona of 22@. In this building, both the structure and ETFE cushions, approximately 45 percent of the total budget work of the build was made using digital manufacturing systems. Another undeniable issue was the construction time: how to do it in eight months? The only way was to use the studio's patents, such as the diaphragm movement cushions, that came from Villa Nurbs, or the bioluminescent paint. Without this stock of patents it would not have been possible.

Therefore, the industry is ready for this change to digital. The problem is that there are not enough architects prepared for the change in operations: creative work through digital production, based on open innovation processes.

## **INFORMATION and PUBLICITY**

### **How important are the communications media in the work of Cloud 9?**

Every day [www.ruiz-geli.com](http://www.ruiz-geli.com) receives about 1,500 visits. Is it a matter of ego or responsibility? We believe these 1,500 people look to see what we are doing so as to observe and be inspired by what's next, what is the future, without wishing to criticize. And this is a responsibility that affects all architects who are interested in research and digital production. Even today, Spain is still one of the major powers in architecture. Japan is perhaps the first, and we could argue whether the second is us or the United States. What we share in this pavilion is the continuation of the model of Open Innovation which implies greater transparency and less competitiveness, something much better for humanity. If we understand Open Innovation as a Linux operating system, we could be sending Apps to the Apple platform, in which the designer receives 60 percent of retail value. Only in this open environment can designers charge more than the manufacturer or publisher...

### **In this moment of crisis, how should public architecture evolve?**

Historically, all social phenomena have three phases. In the digital movement we are in the third because we have absorbed the digital culture: we all have a mobile, an email and use the internet. However, in sustainability we have not yet arrived. Phase one was initiated by Al Gore and American gurus such as Jeremy Rifkin, opening the eyes of the world to the existence of climate change. We are now in phase two: who is a "green" architect and who is not, certifications such as the LEED, the Technical Code... And the next phase three will focus on the relationship between "empathy" and public. Because everyone wants solar panels and urban gardens like Escribà, but although we have the information available, this is not the case with infrastructure and energy.

In the nineties, the School of Architecture of Barcelona with Albert Viaplana gave us the vitamin of the public by instilling its value as a social fabric and as a platform for encounters. At the time the challenge were the drugs and alcohol on the street, and hence the design of so-called *hard squares* (asphalt, cleaning...). In today's society people stay at home in front of a screen: this is our society's culture of entertainment, consumption. Therefore, the public space should be attractive with knowledge: we either make things

happen and be interactive, or it will cease to be a public space as such. As an analogy, public space is mostly software, and where you must invest more is in software. The case of Media-ICT opens a route because it is actually a mixed building, halfway between the public and the private.

### **What is a public building for Cloud 9?**

The Media-ICT has five weekly visits from schools and colleges, charities and institutions such as Harvard, Yale, Bartlett, Qatar Foundation, GBC, EDF...

This is today what we understand as a public building, because it transmits knowledge to society.

### **When do you consider that a work is finished?**

We are interested in the monitoring at the end of the work in order to collect data. Right now, the decision to locate in the Media-ICT responds to two issues: first, the number of visitors we receive each week in situ; the second has to do with being linked to innovation.

### **For you, architecture is only architecture if it is built?**

Yes, but it is not enough. Peter Brook says "there is no theater without a stage or audience"; in my opinion, there is no architecture if it is not built or has no public. So, not just the condition of being built, but, if there is no public response, there is no architecture.

## **RESEARCH**

### **What percentage of time does your team devote to research? At what stages?**

In my opinion, research is 90 percent the exchange of knowledge through encounters, such as going to strategic key locations like the Art Center College of Design in Pasadena, the Buckminster Fuller Institute, CITA, Tecnalía, Smart Geometry... These are places that are interested in our work because it is innovative and establishes synergies that multiply the knowledge acquired.

### **What role in your office does the initiative of the R+D+i Cloud 9 Pool play?**

Typically, an architectural studio works with a foundation of development and implementation of projects, these being the only ones to obtain profits. Cloud 9, however, invests its benefits in prototypes, and in some cases in patents. So if there are no benefits, there is no innovation.

In 2005, Cloud 9 took a turn before we started the Media-ICT. Now, in the office, we all work with innovation through strategic lines. We have a cluster of fiberglass structures, digital fabrication, parametric design, distributed knowledge, distributed intelligence, membranes, biology and climate change. To do this, we have the support of eleven companies –iGuzzini, Acciona, Tecmolde, Burés Innova, Ceramica Cumella, Cricursa, Meefog, BAF Industries Bec, Materialise, Tecnalía– who contribute money or resources to work on innovation through the development of patents that we later apply in projects. Thus, upon completion after one or two years, the company that has investigated with us can build with work budgets of one million Euros, because obviously only these companies will have the knowhow. This is the pool of companies: an initiative that ensures that innovation has a future, and also the basis of the economic infrastructure within our office.



# Sancho-Madridejos

## Architecture Office

Sol Madridejos and J. C. Sancho began their professional activity as SANCHO-MADRIDEJOS ARCHITECTURE OFFICE in 1982.

J. C. Sancho is a PhD architect and Full Professor at the Madrid School of Architecture (ETSAM), Projects Department.

Sol Madridejos is an architect and Projects Lecturer at the School of Architecture of the UEM (Universidad Europea de Madrid).

Their professional activity has been developed from a framework of interests –many times on the sidelines of the prevailing cultural flows– coming as much from the plastic arts (painting, sculpture) and the visual arts (photography, video, comic), as from the realm of thinking and theory. All of this has led them through a working process –in the way of a laboratory– along the last 20 years. A process sustained by a wide map of ideas-themes-projects (as are folds, the tone of space or the void), on which they focus their interests involving space and its perception. This map –that they call The Train of Thought– describes the drifts and connections between their themes-architectural projects and finally materializes in their works, where all their research culminates.

Their work has been published in Spain and abroad, and has been exhibited, among other venues, at the VII, VIII and XI Biennale di Architettura di Venezia, the Biennial Exhibition of Architecture of Quingpu, the Bienal de Arquitectura de Buenos Aires, the Museum of Modern Art in New York, the National Building Museum in Washington, the National Museum of Shanghai, the Palais the Tokio in Paris, and at different architecture exhibitions in London, Paris, Shanghai, Bogotá, Tokyo, Verona and Madrid. Their works have been distinguished with the Anthological Prize of Contemporary Architecture of Castilla-La Mancha and many of their works have been nominated for several editions of the Mies Van der Rohe Award. Recently the Museum of Contemporary Art of Alicante has been awarded with the 'Medalla al Mérito de las Bellas Artes 2011'.

#### Architects

SANCHO – MADRIDEJOS S-M A.O.

Sol Madridejos – Juan Carlos Sancho

#### Team

Paula del Río, Félix Bellido, Bárbara García, Ana Vinagre,  
Ascensión Gutiérrez, Beatriz Ramo, Daniel García

#### Materials

Working models made of different materials: card, cardboard, aluminium..., steel models, large-format photographs, silk-screened glass, expanded polystyrene, polymethyl methacrylate.

#### Time for completion

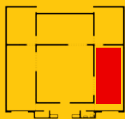
4 months for preparation and 15 days for assembly

#### Approximate dimensions

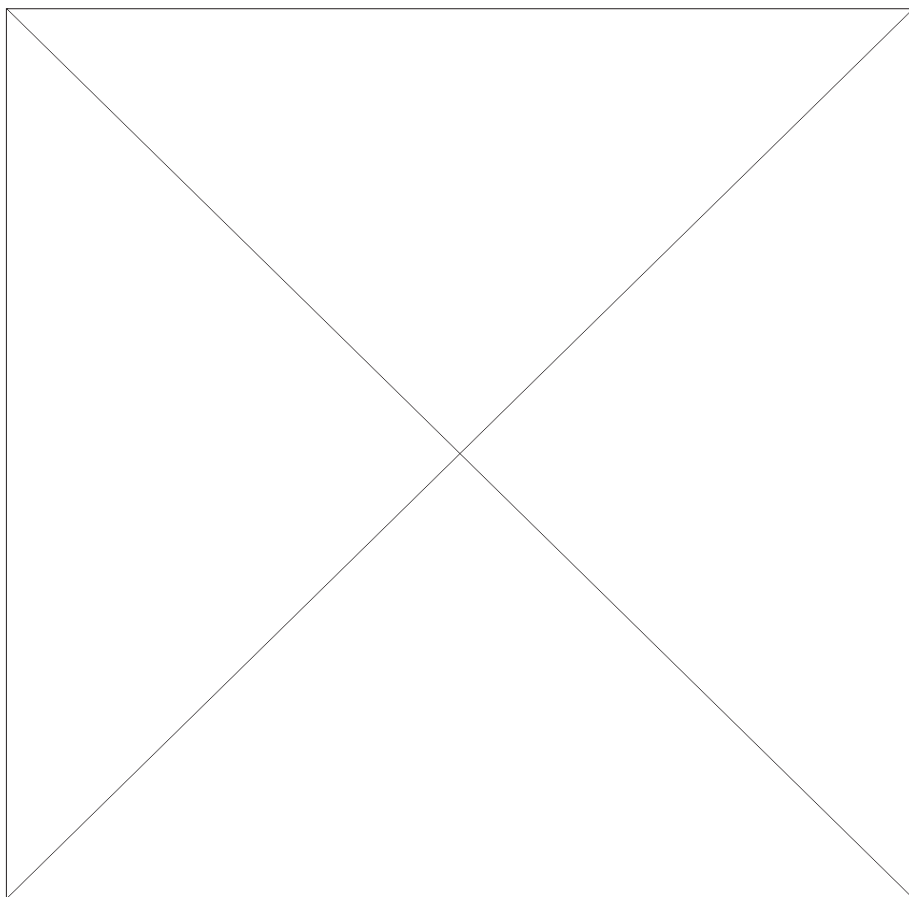
10,5 x 6 m

#### Advisors/Sponsors

Mart Pinatar, Cricursa

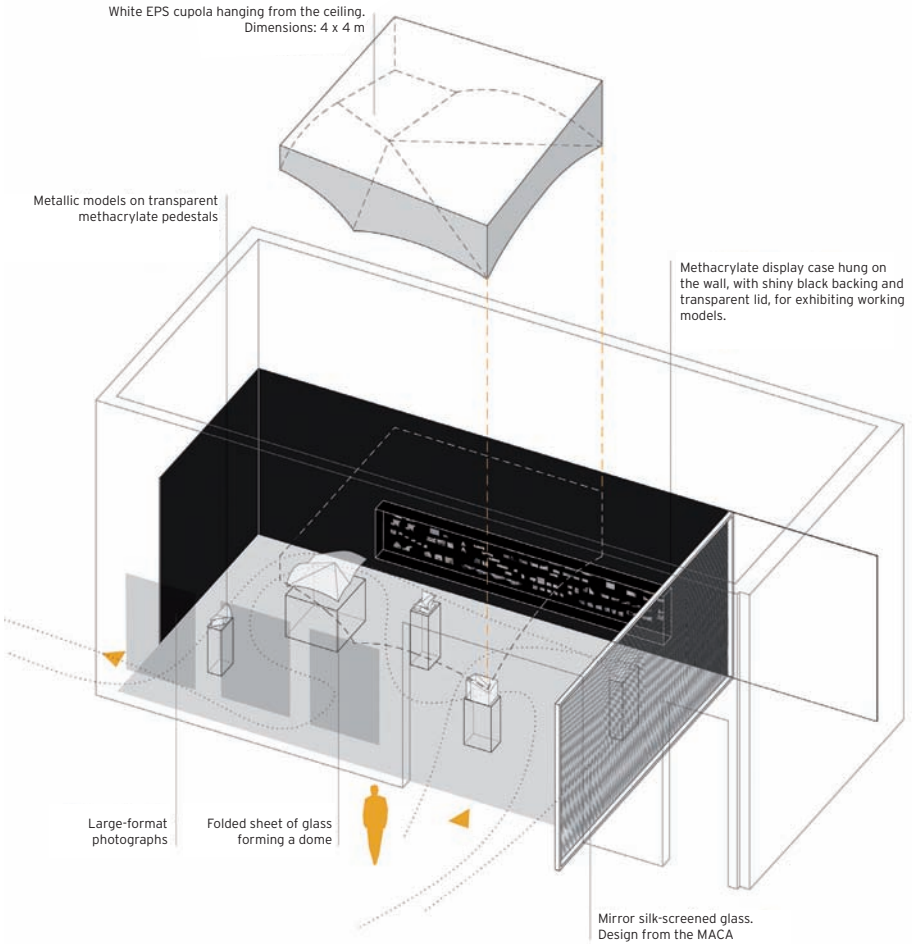


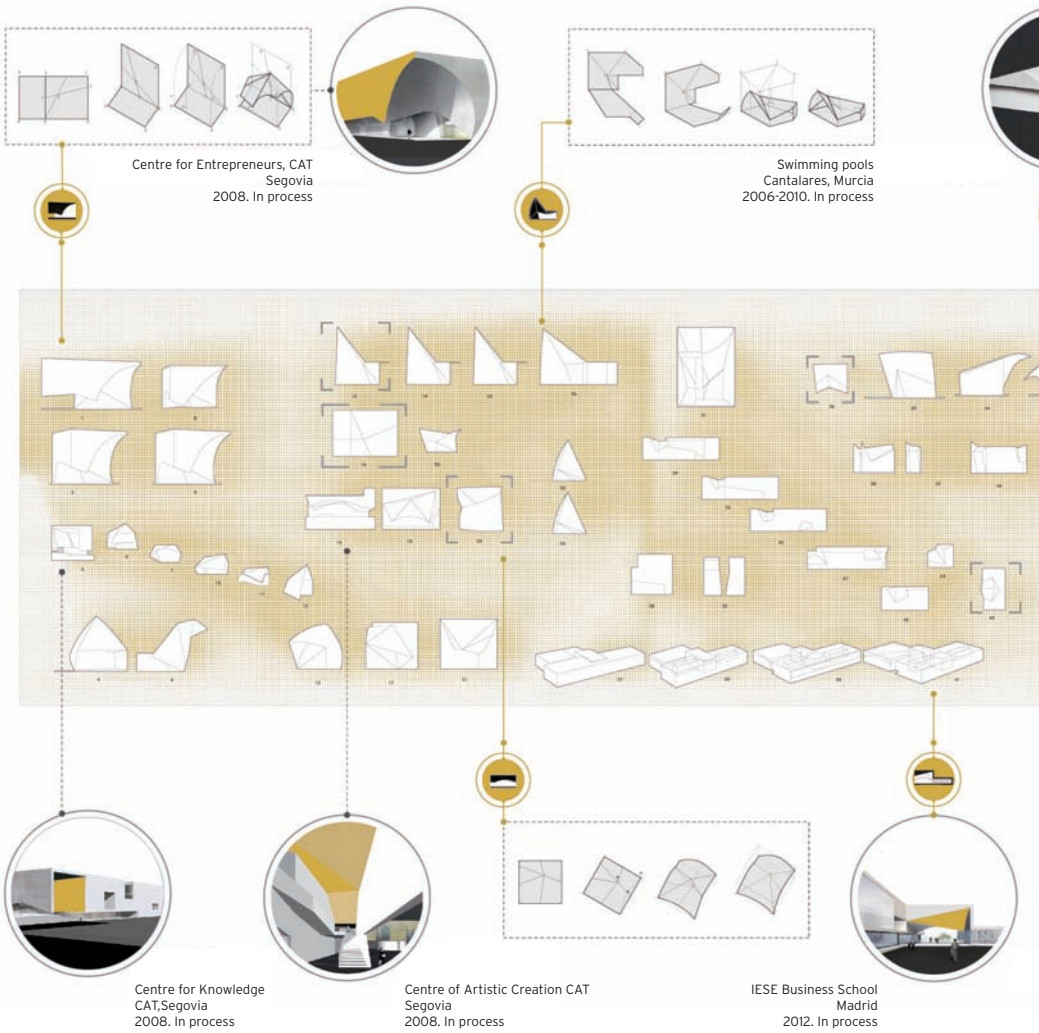
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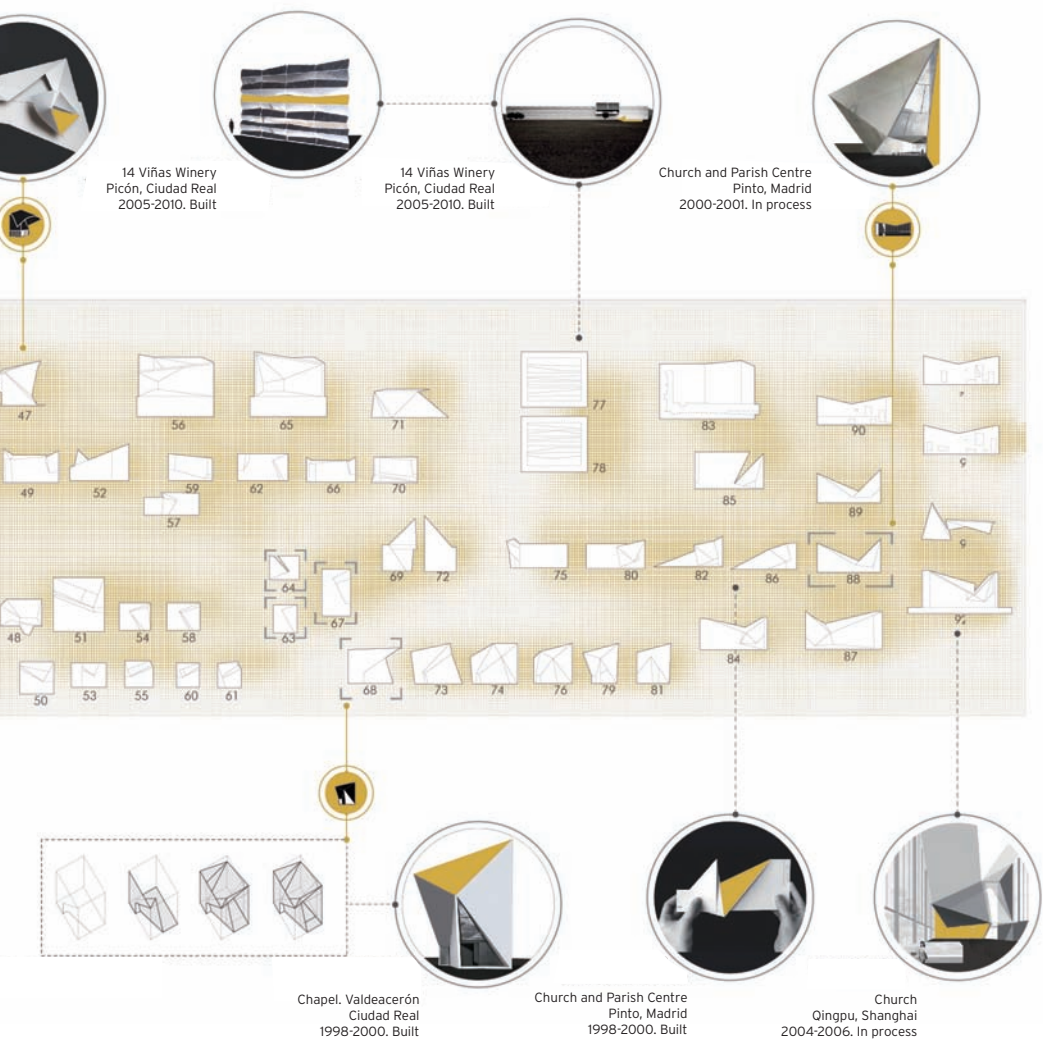


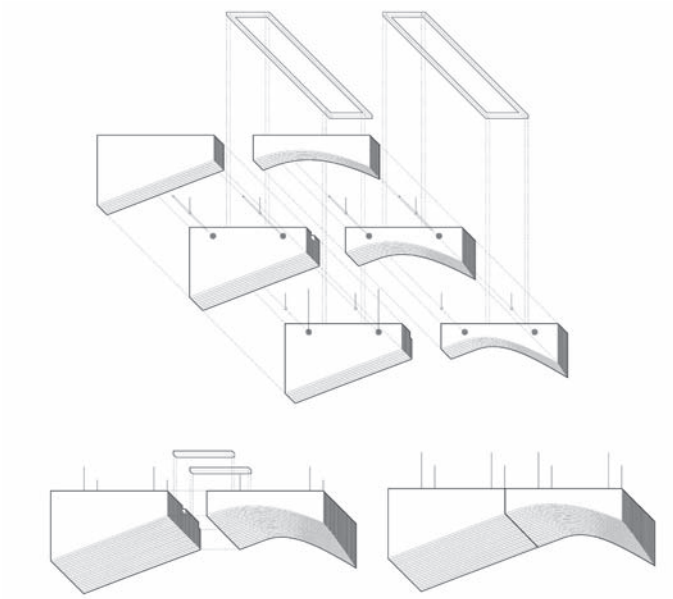
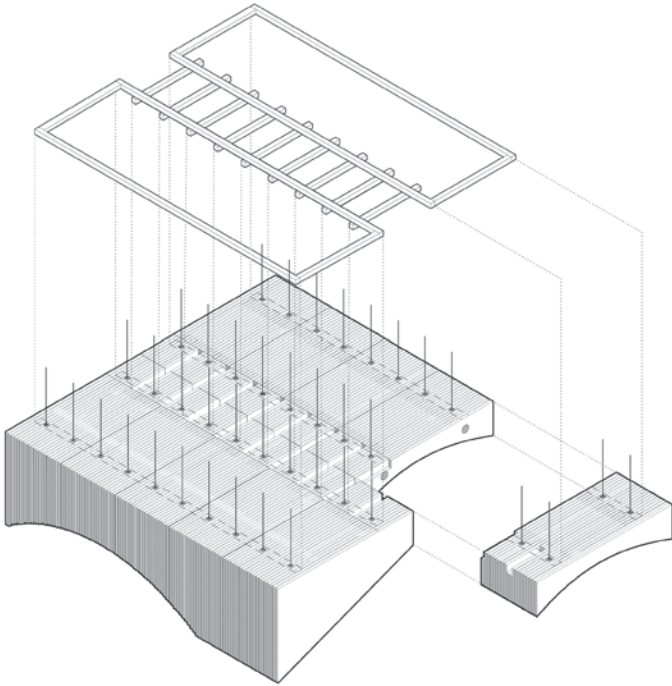




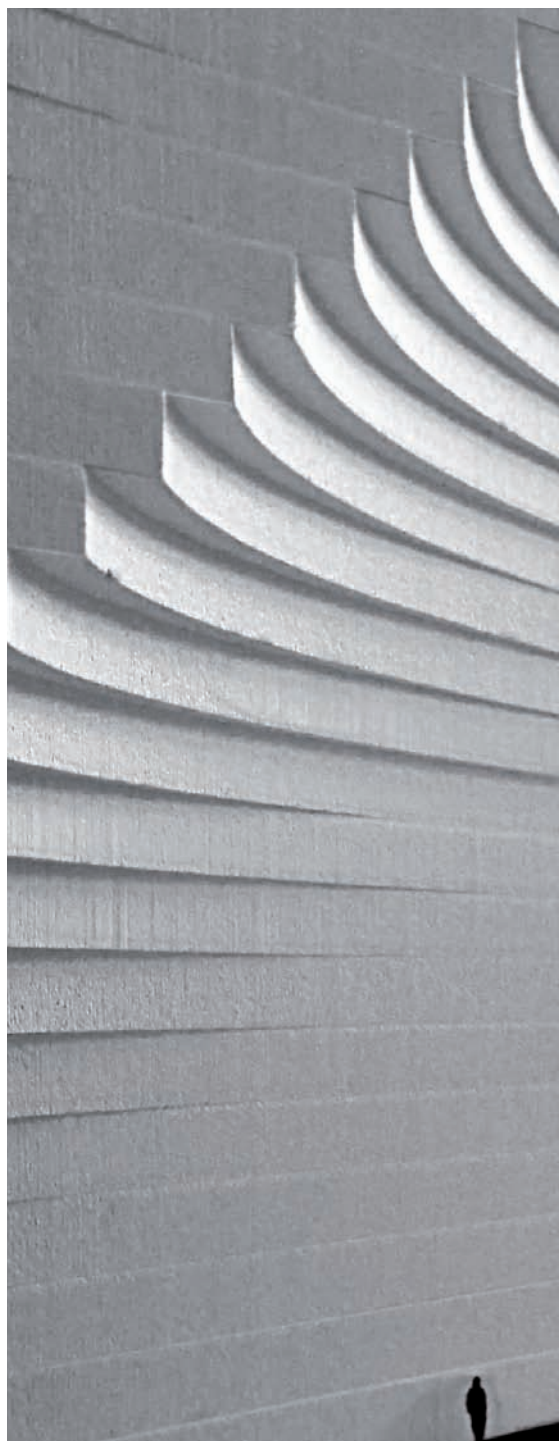






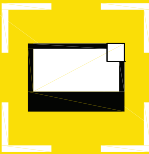


Dome  
Modules assembly





# VOID



MADRID, SPAIN [1991-1996] BUILT  
VALMANERA SPORTS COMPLEX



GAIDAKAO SPORTS COMPLEX [1996-2000] BUILT  
VIZKAYA, SPAIN



FENGXIAN, CHINA [2005] FENGXIAN HIGH SCHOOL



[2004 - 2006] CLUBHOUSE QINGPU, CHINA

[1995] BUILT CARRELO GYMNASIUM MADRID, ESPAÑA



[2006] COMMON AREAS IN CANTALARES MURCIA, SPAIN



[1997-2000] BUILT CHAPEL CIUDAD REAL, SPAIN

# TONE



SAN FERNANDO HENARES TOWER AND CIVIC CENTER MADRID

# CURVED FOLD

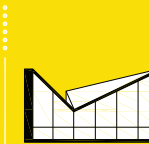


CHAPEL MADRID, SPAIN [2012]



[2006] IN PROCESS ALL PURPOSE CENTRE IN BENALUA ALICANTE, SPAIN

# FOLD



[2004-2006] IN PROCESS CHURCH IN QINGPU QINGPU, CHINA



EIBAR, GIPUZKOA



CHURCH IN PINTO MADRID, SPAIN [2000-2001] IN PROCESS

[2002] PROJECT BUSAN TOWER SOUTH KOREA



[1994-1999] CIVIC CENTRE IN ALCOBENDOS MADRID, SPAIN



[1996-2001] BUILT UNIVERSITY PAVILION IN LA ARRIXACA MURCIA, SPAIN

[2003] PROJECT



PLANNING DESIGN OF PLOT W-7 & E-10  
IN HUANGPU RIVERBANK  
SHANGHAI  
CHINA



LOFTS IN SAN SEBASTIAN  
DE LOS REYES

[2004-2006] IN PROCESS  
MADRID, SPAIN



## POLES

STATE-SUBSIDIED  
HOUSING IN  
CARABANCHEL

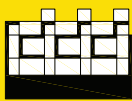


MADRID, SPAIN [2001-2005] BUILT



HOUSING IN CANTALARES

[2006] IN PROCESS  
MURCIA, SPAIN



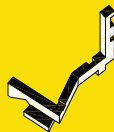
CONTEMPORARY  
ART MUSEUM

[2001-2010] BUILT  
ALICANTE, SPAIN



DUOLUN REGIONAL  
PLANNING

[2002] PROJECT  
SHANGHAI, CHINA



ART FORUM

[2002] PROJECT  
SHANGHAI, CHINA

DO DE  
N HALL  
CENTRE



[1994-1999] BUILT  
SEGOVIA, SPAIN



SEGOVIA, SPAIN  
[2008] IN PROCESS  
[CAT] KNOWLEDGE CENTRE



RECONSTRUCTION  
DESIGN FOR NAMMEN  
BLOCK IN A NEW  
QINGPU CITY  
[2003-2004] PROJECT  
QINGPU, CHINA

BUSINESS SCHOOL  
MADRID, SPAIN  
[2012] IN PROCESS



[2006] IN PROCESS  
MALL

## CROSSOVER



CUADRAD REAL, SPAIN  
WINERY 14 VIÑAS  
[2005-2009] BUILT



[2008] IN PROCESS  
SEGOVIA, SPAIN  
[CAT] COMPANIES CENTRE

## PLEATS



[2008] IN PROCESS  
SEGOVIA, SPAIN  
[CAT] MUSEUM OF ART AND IMAGE



[2005-2006] EN PROCESO  
NANTES, FRANCIA  
BIBLIOTECA UNIVERSITARIA  
EN NANTES



# 05.22.12.Madrid



[JcS] Juan Carlos Sancho [SM] Sol Madrیدهjos [Q!] Inma E. Maluenda & Enrique Encabo

## REFERENCES

**[Q!] To what extent are precedents and references important to you? Would you claim your architecture should always be interpreted within a cultural context?**

[JcS] Each generation handles precedents in a totally different way. The generation prior to ours –I mean people who are now around sixty years old– for example used them literally as design tools, as models to lean on, usually from the discipline of architecture. But for us the references are not something as straightforward... We move in a world full of personal cultural experiences which we use to shape our own universe.

[SM] More than specific references to an image or a solution, what we are really interested in is how to bring to architecture concepts from other disciplines and historical contexts. Sometimes, when we explain our projects, it could be understood that we use direct references... But they are not as such, they simply illustrate an idea that is of interest to us taken from philosophy, sculpture or art, and which we transfer to architecture within its own means and often in a much more complex situation.

**Does your approach to architecture offer multiple readings? Do ideas play the role of mediators in your work?**

[JcS] Any interesting work of architecture or art offers multiple superimposed readings. In fact, true works of art are those susceptible to constant new interpretations, over which each generation is able to provide a new version. Architecture has in turn many levels of interpretation because, probably, it is the fine arts branch that combines greater complexity. It is also the slowest, the hardest to define and also the most powerful. I think of the Pantheon in Rome, a giant that has created an endless force throughout the centuries... a power that in my opinion is not so great in a painting like the Mona Lisa,

which is the great icon of the history of painting. Another consideration between art and architecture is the capacity of transmission, someone from another culture might see a work of art and not understand it and yet, when they enter the Pantheon –we have seen this with Chinese architects– they are amazed to see and experience the space. [SM] Art and culture have always historically been elitist, never understood by everyone. However, in our times culture belongs to the masses, it has become pop (popular)... Therefore, art and architecture have lost their valuable link to knowledge, becoming by obligation something that all are able to understand.

Within the arts, what is primitive in architecture compared to sculpture or painting is the initial understanding made by the user, accessible to all: architecture must be used by people and work well, and should serve to relate and build at human scale. In our case, we understand that architecture, following this first compulsory or minimum reading, must go further, and incorporate conceptual themes that may not be so accessible to all, but which are essential to fully understand the complexity proposed and involved within a project.

[JcS] For us, art –I repeat this often at the ETSAM, Superior Technical School of Architecture of Madrid– is what lets you view the world differently. This involves incorporating new concepts that culture assumes: until the Impressionists appeared, for example, violet did not exist in landscapes, and before Turner there was no fog in London... The simple affirmation that an object creates space may seem very natural today, even obvious, but it is an idea which is not even a hundred years old in our culture.

## SPACE

**Constant spatial research is of paramount importance in your work from the very start.**

**What would you consider the essential, specific nature of architectural space?**

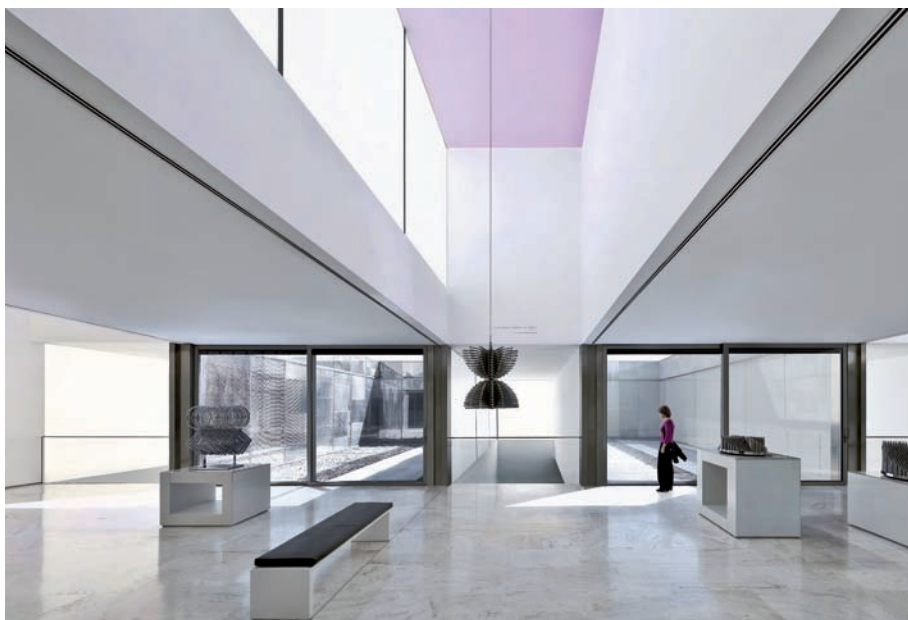
[JcS] Gilles Deleuze writes in his book *The Fold* that there are three ways to manipulate space. The first, which responds to how architecture has developed over the last twenty centuries, is vectorial: arches, pathways, axes, axial break... there is always a direction. And it is gravity, a vertical, which determines everything. Even deconstruction is a vector, even if it implies a break. But there would be a second, which has influenced us greatly in our work: the manipulation of space from the projective viewpoint. And even a third, concerning instability and discontinuities.

As a result of the competition for the San Fernando de Henares Town Hall [1999] we began to develop the second mode of operation, where spatial events derive from a “projective system” of actions. The approach in San Fernando was based on a compact stone box -116 m long, 17.5 wide and 12 high- on which a series of spatial projections act on the matter in an external-internal direction and vice versa. At the point of contact between the outer space that enters and an inner space that exits a tangent results, a point of maximum tension. Tangency in this case is not compositional, but the result of implementing a mechanism of spatial projections.

## SCENES

**In addition to working with this double meaning, in your writings you speak of lightness, density and gravity... also of plasticity. Still, you rarely mention atmosphere or phenomenology, concepts that seem to be linked to your interests and line of thought.**

[JcS] Indeed, although we speak little of atmosphere, perception and phenomenology



MACA, Contemporary Art Museum, Alicante

are essential issues in our architecture and which over time have grown in strength, considering that our projects were initially more radically positioned with regards to the spatial. In this sense, the Contemporary Art Museum in Alicante, MACA, is a project in which perception plays a major role, feeding from the *moiré* optical illusions of (Eusebio) Sempere and (Victor) Vasarely, whose approaches have always interested us.

To speak of space is the hardest thing in architecture, because it is something that all too often is taken for granted without really understanding its meaning... In an interview with Eduardo Chillida, after spending several days together many years ago [*El Croquis* 81-82, p. 14-23], we discussed density as one of the variables of space, assuming (for him) that any architect was able, even better than him, to read different spatial densities. He told us: "But what can I tell you? You are architects and you work with these variables". When we told him it was not so evident, he explained how for him the concept of density was one of the variables that define the space. Then we realized that the variables that "construct" the space, evidently including forms, are not so obvious in architecture, whilst sculptors, painters and musicians employ them. Architecture is always behind, so variables will be incorporated in a much slower manner... Back to the atmosphere theme, though perhaps we do not use the term as such, we rather prefer the concept of space linked to an event to an eventuality. For us, the movement as a succession of situations (or "scenes") is a very important variable that we work with. Thus, one can have a continuous sequence of scenes –a succession– or a fragmentation of scenes – a mechanism of deconstructivist architecture. The possibility of creating a *travelling* project –if we talk in terms of film– in which there is a continuum, a succession of scenes, is very powerful. In this sense, we are more phenomenological than haptic: we are more focused on the sensation of space as something linked to the perceptual rather than the carnal.

## FOLDS

**One theme that is the backbone of your architecture since the nineties, as we mentioned earlier, is the fold as a generator of space.**

**When does it appear in your work?**

[JcS] In this extensive interview with Eduardo Chillida we mentioned earlier, he gave us two ideas. Although at that time they did interest us, we struggled to understand them at first because of their complexity, but we understood they were essential: first, that a fold is a unity, a unity both spatial and material as well as formal and structural; and second, that a fold generates an extraordinary spatial wealth. When we began to address this theme, no one in the field of architecture had really worked with folds in this manner. Let me explain this a little: from then until now many architects, including Zaha Hadid [in the Strasbourg Station] or Peter Eisenman [in Santiago de Compostela] have worked with folds, but not in the strict sense, as we use them. They do not meet the fundamental key points of our understanding of the fold, but "require supports to reach the ground." That is, they remain in a formal approach. A fold should not need orthopaedics or supports, since the actual shape is also supporting. When we built the chapel in the Valleacerón area [2000], we saw how that confluence point with up to six planes was in perfect balance, without the need of auxiliary elements. The structural engineer also realised that the mechanical behaviour of the chapel is based on the geometry of the shape and folding, which is what controls the strain. That is what I mean with the nature of the fold.

**Chillida speaks precisely of the continuity of the material and its ability to create space. How can this topological character be retained in a discipline such as architecture?**

[SM] With Chillida we were aware of this understanding of the fold as a generator of space, with which he worked as a sculptor. It was something of his own as much as part of sculpture. But we also understood that it could be ours and also part of our discipline, provided it was transferred to the architecture by appropriate means. In fact, what now makes it easy to work with the folds in architecture are the means offered by technology. On the one hand, the computers to make calculations, such as modelling, to gain a greater control; and on the other hand, obviously the material. We use concrete because it is the most responsive to the idea of continuity that we are always looking for.

## LANDSCAPES AND SCENES

**In some of your latest projects the theme of the building and urban connector appears, linking accesses at different levels, as in the MACA, or uniting several streets, as in the shopping centre in Eibar. Is it an established idea in your architecture or a newer incorporation? Do you always design the building based on its position and urban understanding?**

[SM] The understanding of the building as a generator of a new urban situation and as a connector is a subject that has interested us for some time, although local conditions are not always the same. In the San Fernando de Henares Town Hall, for example, the space is not linear, but the transit is from a façade located on the central axis, continuing from the historic square to another in which the axis is already displaced, alongside which we also proposed a square. Thus, the building appears as one between two squares, and aligns



symmetrically with the historical while breaking the symmetry of the new façade. This idea of building and urban connector at various levels is something that appears in all our projects when the urban conditions permit. In the case of the shopping centre in Eibar mentioned before, the building itself is understood as a public path that solves the problem of the existing disconnection. We are not interested in autistic buildings, but those linked and integrated with the city.

[JcS] It is also something that is very clear in our proposals in China. We always propose two operations to interact with the site: first, creating new connections with the proposal, and second, making the building absorb the tensions of the site. Thus, what may sometimes seem like pieces placed according to a formal arrangement, are revealed, once you know the place in situ and in certain depth, as buildings closely related to what you want to create.

**Continuing a modern tradition, it may be argued that your projects –especially the chapel in Valleacérón or the winery of Picón [2008], both in Ciudad Real– are positioned in front of the landscape, and clearly function as poetic pieces or artefacts that establish a relationship of opposites with the place.**

[JcS] Heidegger suggests that nature is waiting for man to complete it and that man always acts in an artificial manner. We understand it also as such. To engage in a simulation of nature is in my view a perversion, which is the other side of the dice.

[SM] In each project, we work with the landscape differently. The chapel, for example, is an object in the landscape, whilst the wineries are more integrated with the territory, projecting outwards and modifying the site.

## **PUBLICITY**

**When do you consider that a work is completely finished?**

[JcS] The architecture becomes architecture when people occupy it and live it. In the case of MACA, recently finished, it was only when the museum installation was completed –for which the museum was designed from the start– and began to be visited, that it became a complete building. This notwithstanding, we often enjoy photographing the buildings when they are empty, as this is the time when we can learn from what we have done and discover other elements.

**For you, architecture is only architecture if it is built?**

[SM] We conceive architecture as one that can be built. The answer is absolutely yes, because the final validation of the process is in the built fact.

**What is a public building for you? Have you changed your way of thinking with regards to the public character of a building?**

[SM] Our concept of public has not changed in the past thirty years; we understand that public space is still valid. What has changed is the social vision of public architecture.

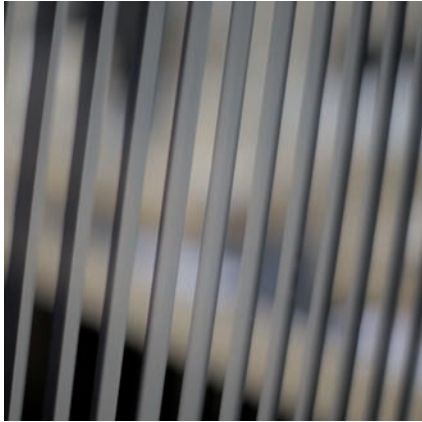


Chapel in Valdeacerón, Ciudad Real

## RESEARCH

### **What percentage of time does your team devote to research? At what stages?**

[JcS] I do not know if it is something that can be quantified... We are much involved in investigating architectural ideas that interest us without necessarily having a commission, that is to say we develop proposals and even make models to test new solutions for future commissions, for though the times in architecture are very slow and the process is very long, when they ask you for a first idea or you are invited to compete it is all very immediate, and must be solved in a month or two. Our way of working has nothing to do with an "instant idea", we are much slower producing and need a complete process to investigate and discriminate results. In fact, of all the projects developed over the years we have constructed only a very small part, so the percentage of all this reflection and previous work is enormous. We believe in working with a more coherent set of constant interests, rather than to make a mere momentary display of resources that can be applied in a competition, unfortunately all too common. We prefer themes to repertoire.



# selgascano

José Selgas. Born in Madrid 1965  
Graduated Architect from ETSA Madrid 1992  
Worked with Francesco Venecia on Naples in 1994-95  
Rome Prize of the Spain Academy of Fine Arts in Rome  
1997-98

Lucía Cano. Born in Madrid 1965  
Graduated Architect from ETSA Madrid 1992  
Worked with Julio Cano Lasso until 1996  
Member of Cano Lasso Studio since 1997 until 2003

selgascano works in Madrid. It is a small atelier and its intention is to remain so. They have never taught at any university and they tend not to give lectures in order to focus intensely on their projects. They centre their work on the construction process investigation, treating it as a continuous listening to the largest possible number of elements involved in it, from manufacture to installation. They have exhibited at the MoMA in NY, the Guggenheim in NY, the Venice Biennale, the GA Gallery in Tokyo, The MOT (Museum of Contemporary Art) of Tokyo and the Design Museum of London.

Their main finished projects are:  
Badajoz Congress Center and Auditorium. 1999-2006  
Cartagena Auditorium and Congress Center. 2001-2011  
Plasencia Congress Center and Auditorium. 2005-2012  
Merida youth movement factory building. 2008-2011  
Silicon house. Madrid. 2003-2007  
Selgascano studio. Madrid. 2006-2008

Architects  
selgascano

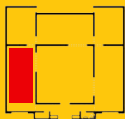
Advisors  
Josep Selga (biologist); Juan Laureano (agronomist);  
Toni Prats (design and installation); Gilberto Ruiz (models  
and installation)

Collaborators  
Mario Escudero, Alicia Cervera & Andrea Danese

Materials  
Recycled plastic, steel, coconut fiber, plants and air

Approximate dimensions  
11 x 4 x 5 m

Sponsors  
Grup Roig, Pelemix, Santa & Cole forestal, Porec,  
Superoots air-pot



# Al aire (between air)

This living installation, muttered about a long time ago and finally driven forwards by the Biennale de Venezia, is the beginning of an architectural and biological laboratory which involves the recording of data, adaptations, modifications and conclusions. It represents a firm intention and a real expectation of broadening our way of seeing and perceiving the behaviour of Nature, of erasing that part of our memory, fixed as an innate idea, about where and how Nature developed, adding new possibilities so that it recovers part of the large amount that it has already lost and the large amount that it will continue to lose as a result of our continuous invasion of its territory.

Perhaps everything began with the study of some research by the NASA into the growth of seeds in zero gravity, when we became intrigued by a photograph of an unexpected tropism which affected moss seeds in space. That movement caused their growth to spiral in all directions, although normally, in microgravity, most plants grow randomly in various directions.

Perhaps because Nature is what remains the most unalterable by technology, the relationship between the two has always been unidirectional: technology has always been

used to restore space to Nature. That caused the concept of the natural and that of the artificial to become incompatible and antonymous in our memories.

With these prototypes that we propose in the AL AIRE (betweenair) laboratory, we are trying to re-use existing technology and to provide new spaces, artificial ones, for the growth of Nature.

We say "re-use" because a lot of technology was born and has developed because of the shortage of land and the strong demand for food, which opened up new possibilities for the agro-alimentary world. But architecture, which is always a slow field, "too slow to innovate" in the words of Cedric Price, and in which everything arrives very slowly and late, has not yet adapted.

The technological advances that we gather from other fields are, first, the provision of air to roots -just as necessary as water- by newly-designed containers which allow the plant to develop in a reduced volume of substratum. The design of this new container favours the formation of roots and their ramification, achieving a high radicular density in a restricted volume. It must be emphasized that without air there is no radicular respiration, so there can be neither growth nor development.

Secondly, dissociating the idea of the planting of trees and bushes from the availability of large areas of land, and eliminating the idea of high yield through the use of various hydroponic techniques, much developed in horticulture, which allows cultivation without depending on soil. With an adaptation of these new techniques, now available on the market, we propose to use only air as the medium of growth for Nature. Every part of space is usable, and when the weight is reduced to a minimum, there is also the possibility of mobility, which is perhaps the most important distinction of all.



Apart from a possible later use of the results in the world of architecture, we are also seeking botanical experimentation with the biological analysis of its growth due to the movement of the parts. For that we shall use a great variety of plants and trees to be able to analyze the aerial behaviour of each of them as much as possible.

At the end of the whole process, we think we may be able to provide some conclusions for an elastic architecture, modifiable continually to adapt itself to the changing conditions which surround us. Price called it "Anticipatory Architecture", an impermanent architecture designed for continuous changes. Or perhaps, on the contrary, we shall get closer by returning to what Raimund Abraham called an "Elemental Architecture". But, in any case, it is a question of trying something which, starting from what is very recognizable and alive, succeeds in changing our thinking somewhat in order to provide other ways of looking at everything that surrounds us.

selgascano, architects & josepselga, biologist



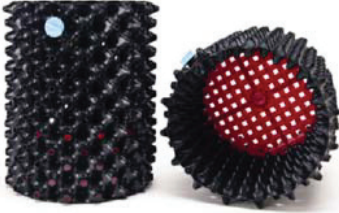
Ceratodon purpureus in microgravity

AL AIRE laboratory assembly

We invent, re-use, take the advantage of the experience, technology and knowledge developed in other fields



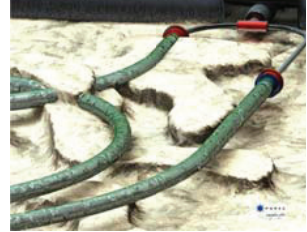
Airpot product are made from Recycled plastic



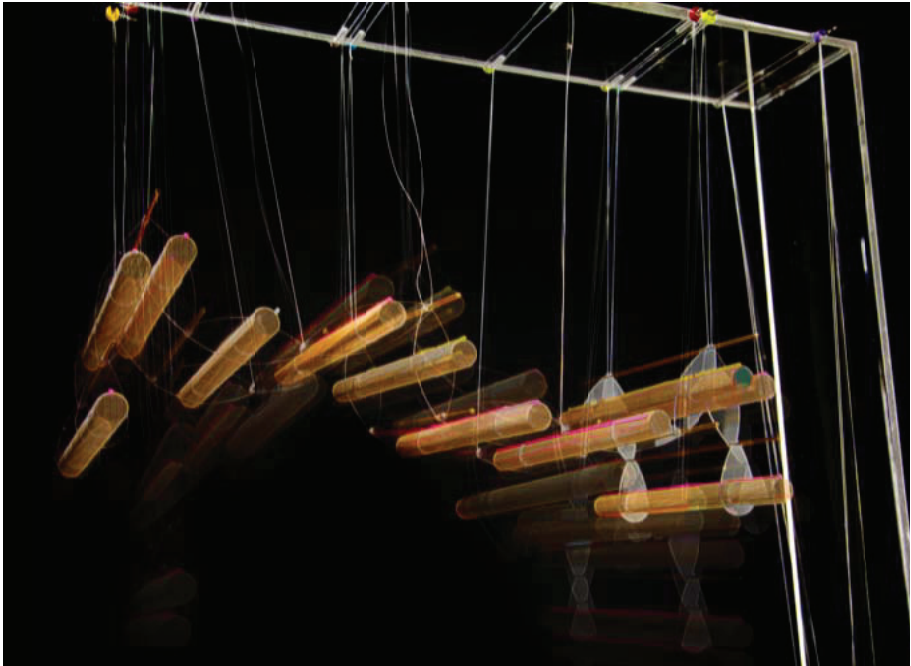
Airpot System



Hydroponics



Porec catering Sleeve irrigation system



achillea mille



achillea millefolllum



anthemisa tinctoria



artemisa stelleriana



lanceolata polaris

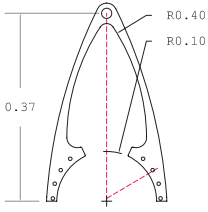


coreopsis moonbeam

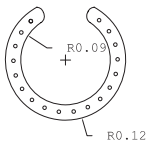


dioladenia

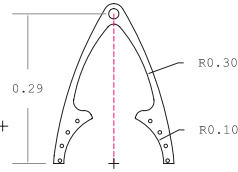
Linkage Mechanism



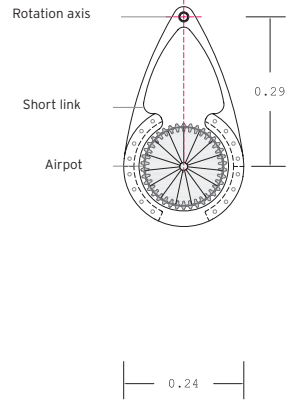
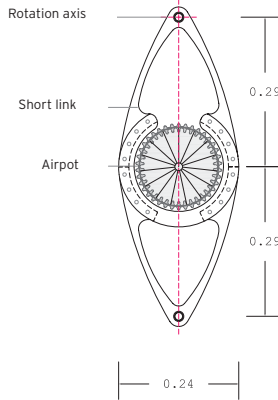
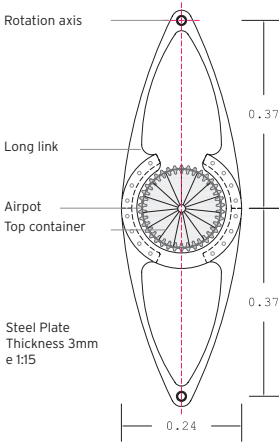
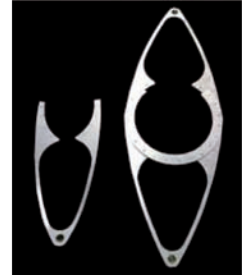
Long link  
Laser cutting, Steel 3mm



Ring  
Laser cutting, Steel 3mm



Short link  
Laser cutting, Steel 3mm



geum totally  
tangerine

graptoveria

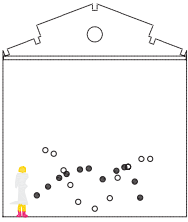
helianthemum  
nummularium

helenium rubi

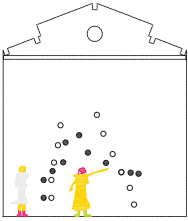
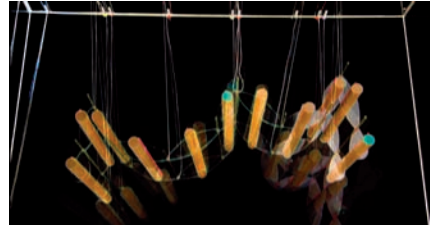
heliathus helisol

hypericum  
calcvniun

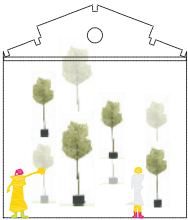
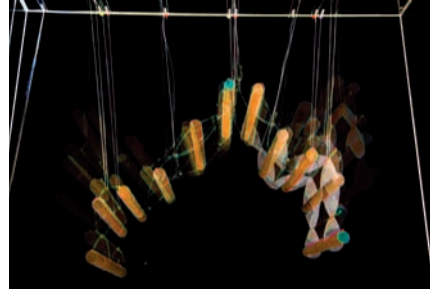
mercadinoa magic  
carpet



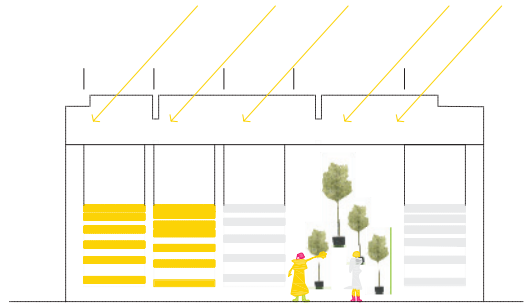
Section AA'



Section BB'

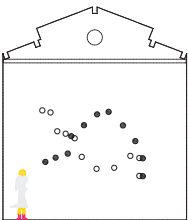


Section CC'



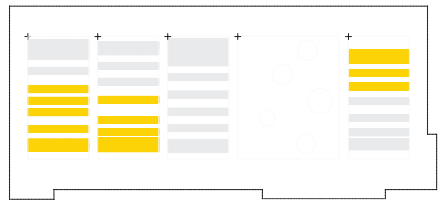
Elevation

AA' BB' CC' DD' EE'



Section DD'

Ground floor



AA' BB' CC' DD' EE'



*nepeta mussinii*



*lamium maculatum*



*lavatera barnsley*



*oenothera macrocarpa*



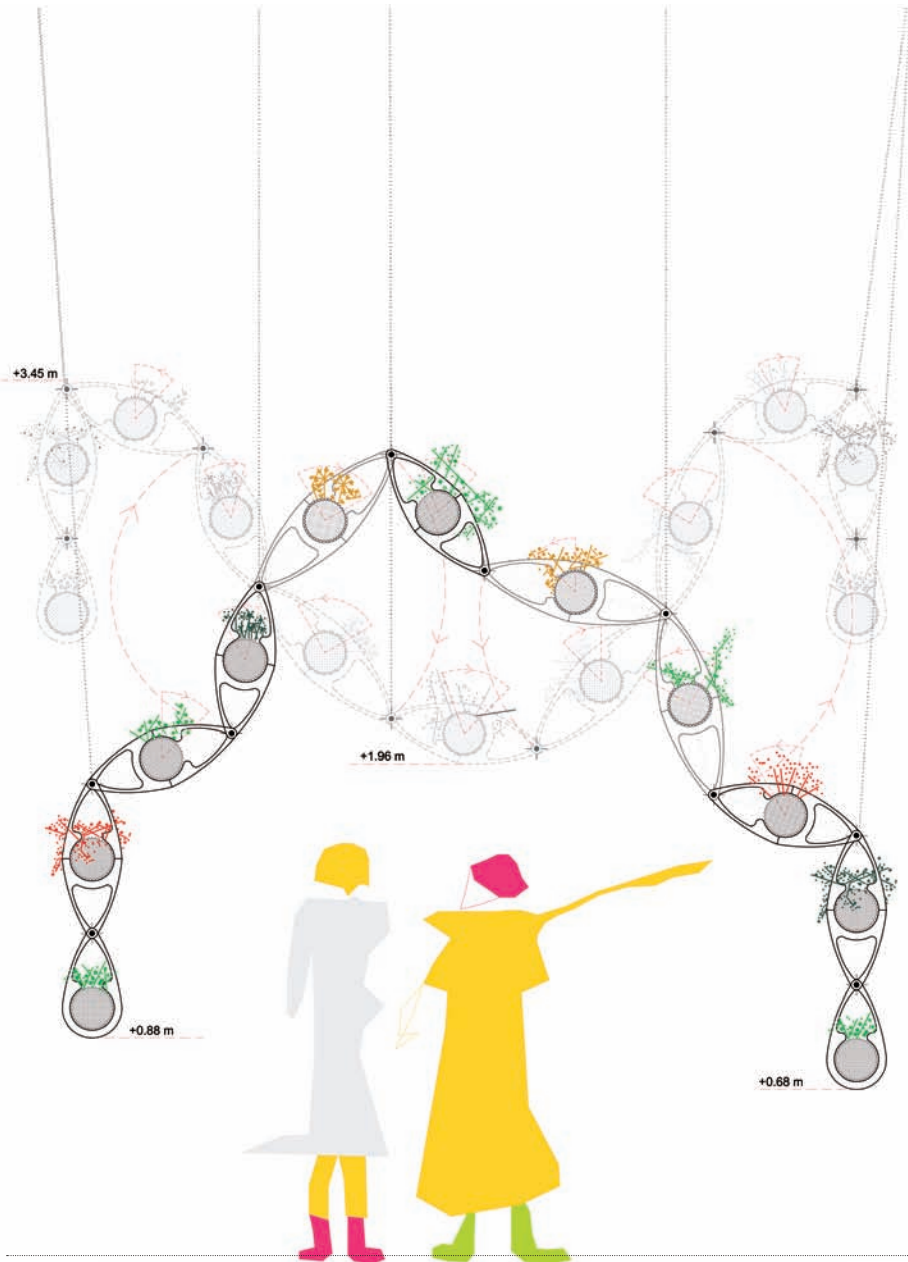
*pelargonium peltatum*



*pentemnon pensham*



*pentas lanceoladas*



Section BB'



pentstemon pensham



persicaria affinis



perovskia littlespire



phlox blue moon



physostegia virginica



polemonium yezoense



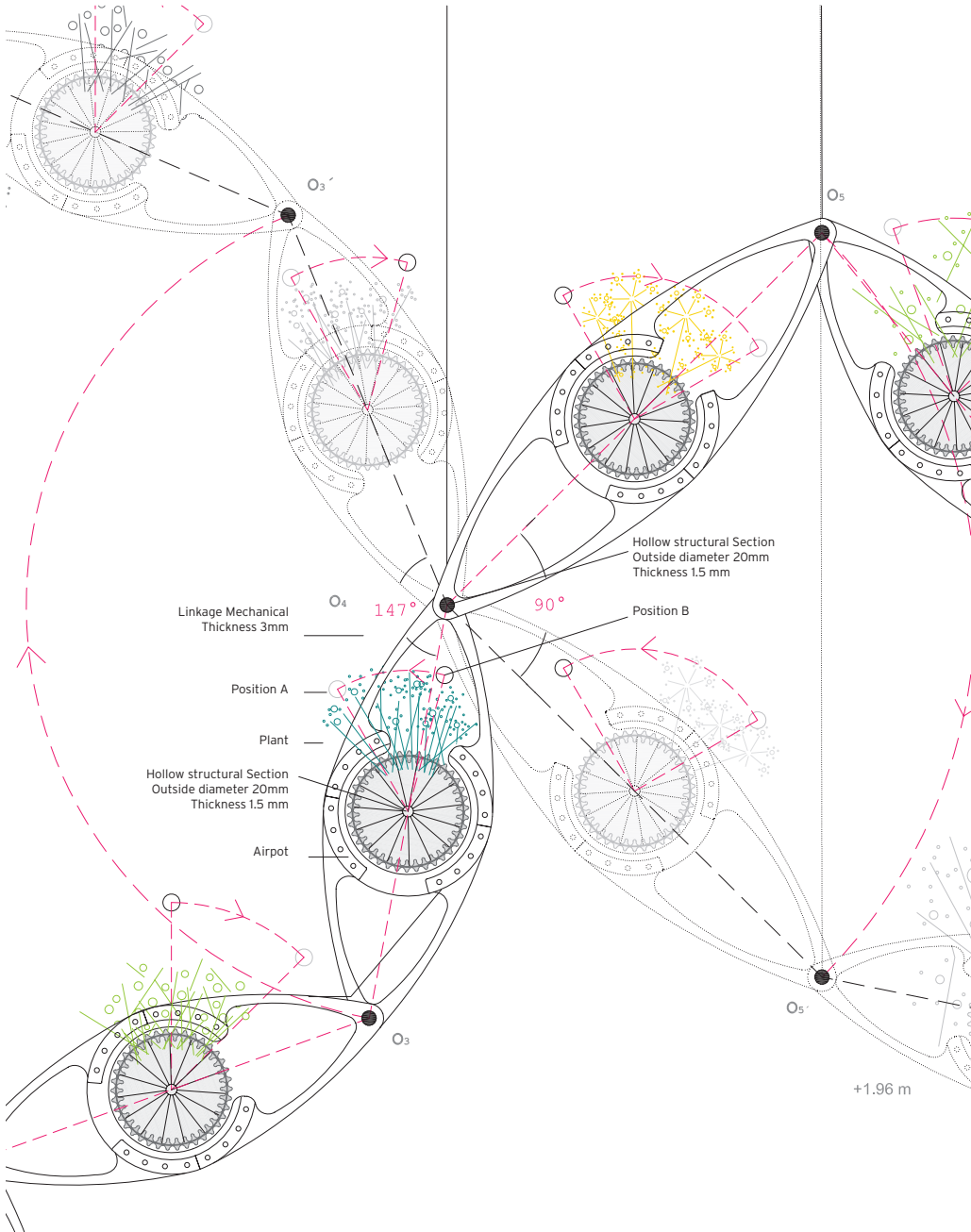
viettes little suzy



salvia officinalis



salvia nemorosa



santolina  
chamaecyparissus



sedeveria hybrid



sedum clavatum



sedum purple



sedum  
hybridum



sedum rupestre

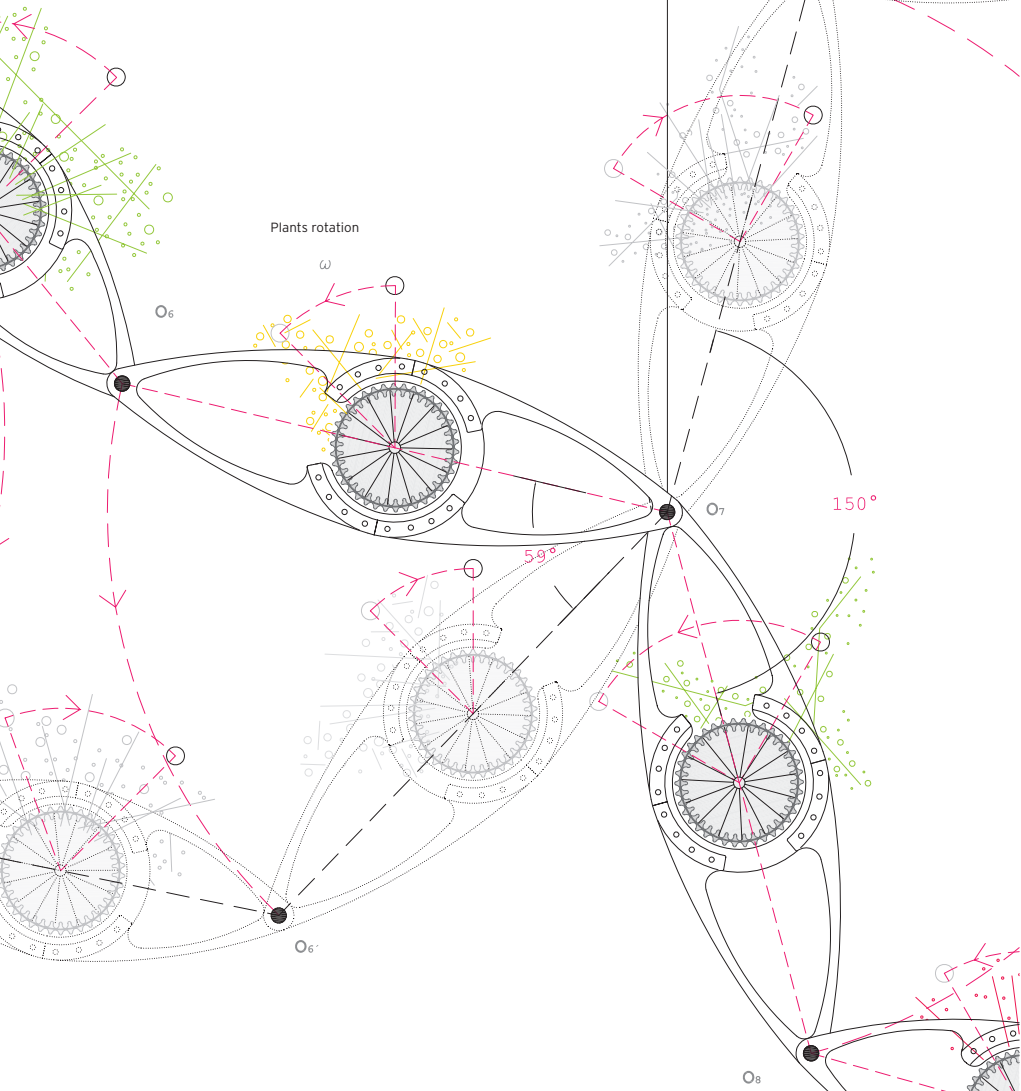


sedum  
spectabile



sedum spectabile  
autum fir





sedum red carpet

sempervivum arachnoideum

setcreasea pallida purple

solidazo cutleri

stachys monnieri

teucrium chamaedrvs

thymus citriodoros variegata

thymus vulgaris



# 06.07.12.Madrid



[sg] selgascano [Q!] Inma E. Maluenda & Enrique Encabo

## SILENCE

**[Q!] selgascano are somewhat refractory to the usual exposure of architectural media. You are never filmed, rarely write and when you do, you use your own terms.**

**How important is the discourse in architecture to selgascano?**

[sg] "Discourse" as a word is too generic, too open. An architect's discourse must be in their work. Its not that we are not interested in other disciplines, on the contrary... literature and video, for example, are very important to us and, indeed, we use them often. But what we can do, and what we have been fortunate enough to do, is to construct buildings. To build is our way of telling the concepts and ideas we carry.

**selgascano speaks of silent and isolated architecture, which seems completely removed from "vulgarism", a term you frequently use. What is for selgascano therefore, vulgarism?**

We mean vulgarism referring to the common people, to the popular. We ourselves are part of this concept, because we believe we are common people, ordinary people, not above average in intellect or sensitivity. It is this mediocrity of society that we understand as a factor to be applied to our work. We seek to establish links and connections between what we do and society, to distance ourselves from the personal discourse so characteristic of architects, applied to their works, but never properly understood.

Vulgarism, as such, could be understood almost as a derivative of pop... For us, architecture is absolutely social, it always "should be", and whose character is permanent. In our case, moreover, our client has almost always been society, as what we have built is public work. We believe therefore that our architecture should be available to all, accessible and understood by all.

### **How do you reconcile the idea of being instantly intelligible with your silent attitude?**

“Vulgarism” and “silence” are two factors that can proceed in parallel or be mixed. With the buildings we have built we have been increasingly aware of this. The strangest building we have built to date, the Factoría Joven de Mérida [Youth Factory of Merida, a kind of skate park and meeting center], while being very particular and within the social context of a low economic status neighborhood, has been well understood by the public. But it is a project that has also been understood by architectural critics, the understanding is transversal. In the end the critic is the same as the average neighborhood person: he is also kind of vulgar, as we all are. It is this situation where society and critics are connected, which can occur within culture and art, which seems to us the most interesting.

### **METHOD**

#### **What does “chaos” mean in the work of selgascano?**

Chaos... Some time ago we realized that our work structure is messy and chaotic, compared to other architects who are much more organized with times and processes. It is clear that we are not and we cannot help it; it is a feature of our own personality. And though at one point we did plan to systematize ourselves more, we realized that the chaos derived from the confusing process is useful, because it requires you to revisit constantly the same places, and also allows the gathering of ideas and valuable contributions that otherwise would not have arisen. In the end, everything ends up articulating a new order, all at some point is repositioned and the unimportant is removed, to reaffirm everything that must remain. In the case of Cartagena, for example, the situation was extreme, because after many twists and turns we returned to our initial intuitions... the project is built exactly the same as the competition model.

Chaos is something in nature, just as there is order. Before any spatial planning, including the universe, there has always been chaos... Chaos is an intrinsic part of how we work, both in the design phase and in construction. Some time ago that chaos was a personal fact, intuitive. Now it is something we are aware of and we use it as such. We are comfortable like this.

#### **selgascano speaks with a certain detachment about their own architecture. Where are your most intense points?**

Probably our architecture has no recognizable base, it is not even part of anything. Arguably, we are eclectic. We have been fortunate to build, for example, three conference centers in Spain, and they do not really resemble one another. Badajoz is circular because it is inside an old fortress that was bullring; Cartagena is longitudinal and of straight lines because it is in a port along the docks, next to water; and Plasencia is an object, a *ball* that belongs to the landscape, completely disconnected from the city. What they do have in common is an indifferent attitude on our part, allowing the preexisting to grant the logic, to create the order.

That point of architectural determinism is of interest to us as our own philosophy: to recognize the guidelines that the place provides. Assuming these layers can lead to a determined architecture, specific, or whatever it is. These determining factors, the previous, this history of the place is what we always try to promote in a project, while we do not allow space (presence) for preconceived ideas.

## MATERIALITY

### **In selgascano, when and why does this affection for materials like acrylic, textiles, rubber and colored tarmac appear?**

At first we were dogged by certain academism... we thought there were "purer" materials which had to be used, and others that, by contrast, did not belong to the world of architecture. At one point we discovered that this is not the case, and that many materials, although neglected, are also fields to be worked within architecture. Methacrylate, for example, is a material with over one hundred and thirty years of history. Similarly, many plastics have been around for a long time and, having evolved, can now offer better durability and have a greater number of possible applications and processing.

### **How do you understand materiality in the architecture of selgascano?**

We are interested in all materials, including the organic. It is a decision that we make in every project and evaluate repeatedly throughout the process: what materials can we use? Fortunately or unfortunately –I think luckily– we have always had to work with very low budgets that have made us open our eyes to the possibilities offered by cheaper materials that, albeit not common in architecture, are available and respond well. Budgets have also led us to use certain materials in an unconventional manner. Builders are not usually open to change or innovation with materials, but when you calculate the figures and your solution costs one fourth, they accept immediately. For example, in Mérida we studied what was the cheapest material used in construction in Spain. It proved to be one millimeter corrugated polycarbonate sheet, which moreover, as cladding, is... vandal proof!

### **Thanks to digital media production and its ability to manufacture the specific we have recovered the direct contact with the craftsman. Does selgascano believe in architects as craftsmen?**

"Craft" is a word we like a lot, also in the sense of the hand made. We believe that in architecture it is important to see the human hand. We are also interested in the imperfection that results from the manual... Le Corbusier, when building the Unité of Berlin,



Conference Centre and Auditorium El "B". Cartagena, Murcia

said German concrete work reached a perfection he was not interested in. This artisan condition that Le Corbusier claimed for concrete is also of interest to us. In Plasencia, the concrete work is probably the worst in European history of construction. This result, if you look at it in the right light, is interesting because it provides localism to the building: the auditorium is built in Plasencia, not in Switzerland, and the concrete structure, very complex, is built by local builders. So this concrete, full of cavities and errors, is actually wonderful; not a problem at all, although builders constantly want to cover up or fix the defects.

The question of smallness and slowness arises and is related also to this issue. Our studio is small because we want it to be. You can choose to have a large restaurant or a small bistro with four tables you can manage, which you may serve personally with great care and time, be attentive to each client and each dish as it is served. We believe the bistro still has much to offer, although in recent years we have heard many times that architectural studios in Spain should reorganize and get bigger. But growth requires a much more expensive structure and much higher fees than ours, which today is unworkable. The smaller the studio, the easier it is to keep... or even, to stop and pause.

We are also interested in the small as a fact, as a process, as a workplace. And so we try to do it all a little smaller, even the models. There is also an economic point to all these decisions. We have talked already about the economy in relation to materials, and today it is probably the factor that matters most in our work.

## MAPS

**The selgascano universe seems to be built from the margins. Photographers like Chris Marker and writers like Ezra Pound or Thomas Bernhard appear frequently in your writings, revealing a certain peripheral vision. From what references does selgascano build its architecture?**

Precisely, these are good examples of people we are interested in; their work, amidst the countless influences that we handle (not just in architecture, but in many cases literature and gastronomy, among others), within our chaos and without discerning, at a certain point in our projects opens our eyes. But we do have a very clear reference in architecture: Julio Cano Lasso. Lucía's father instilled in her, as in her entire family and everyone around him, the love of nature. One could speak of Cano Lasso as our teacher.

## PUBLIC DOMAIN AND INTELLECTUAL PROPERTY

**What is a public building for selgascano?**

Sáenz de Oíza said the public is the usable before being used. For us, the public is not necessarily what we know how to use, because the element of surprise also has its place in a public building. Somehow, public architecture is connected with the idea of vulgarity and the fact that it must be usable by all.

In Spain, it is questionable whether all buildings erected in recent years meet a real demand by the public; but rather that politics has forced the demand. In any case, the value of the building appears when in use. For while it is unused, the truth is that it does not exist. This is something that the office experienced closely in the case of the Plasencia auditorium: it is with great concern we see the building nearing completion on hold, without knowing how it will be resolved...

### **How does selgascano understand the question of authorship?**

We do not give any value to the authorship issue, it is not of interest to us... Some time ago we thought of working anonymously, but it is really difficult, almost impractical, both by law and by the fact that it is very difficult to receive commissions if nobody knows your work. Although we still think it is very interesting because architecture, like any creative work, can be anonymous and have no need of authorship at all. Which is not contradictory with the architect taking charge of the project, making the decisions and directing until the end.

### **Do you think the public establishment is ready to accept personal proposals? And the average customer?**

Of course. It is not only ready, but society increasingly demands it. In the housing project in Vallecas, for example, we proposed a different way of life, surrounded by plants and with a natural ecosystem, with all that this entails. But the main problem was that the future residents were not informed of the housing conditions, so they got worried and did not understand the benefits of the proposal in its future quality of life. Our concern was such that upon getting the first calls, we decided to receive in our studio during several Saturdays four or five families who were responsible for the communication to the rest of the group. And although at first they were horrified by the project, after explaining the reason for everything, they understood immediately and appreciated the value of the proposal. They understood perfectly that the finished façade with plants was a climatic mattress, that we reserved the exterior of the housing for large families leaving a common space for children to play. At that point we had to resign, and the EMVS [Empresa Municipal de Vivienda y Suelo, the municipal corporation for social housing] changed the project... the new façade full of windows once again provoked horror amidst the future owners who rejected it almost unanimously. Somehow, they had made the effort to understand the why and how of our project. So, we are convinced that people want to be offered new ideas that are useful and functional, simple and intelligible, and that will cause a particular feeling or experience.

### **NATURE**

#### **It is clear that nature is an obsession or big concern for selgascano. Is architecture a form of preservation?**

The human species has always used violence against nature. In this sense, architecture is artificial, it always contrasts with nature. Moreover, now man is destroying the natural environment, so it is time to reverse this process. We believe therefore that architecture must act to promote nature's place in this artificial world. This involves designing new mechanisms to attract or create artificial nature in cities; we are not talking of simple gardens, but to work in the application of agronomic techniques in the building process. For this reason, the work we present this year in the Spanish Pavilion of the Venice Biennale (called *Al Aire*, or *Betweenair* in English) is based in techniques that are innovative in architecture but at the same time completely common in the world of agriculture. Our proposal is based upon the fact that plant roots need much more air than water... It is a sort of hanging garden, an artificial nature that always seeks air.



Silicon House. La Florida, Madrid

## RESEARCH

### **What percentage of time does selgascano devote to research? At what stages?**

For us, research is continuous: we understand it as a challenge to find and propose different answers and try to resolve all as best we can. In fact, we prefer to invent or innovate, and when we have solved a system we try not to use it again so that we can test new possibilities, and find solutions in fields that are not strictly architectural, that we can export or apply in our work.

And although we are disconnected from the academic, we do not believe that this a problem, quite the opposite. At one point we made the decision to be fully involved in the office, and today we see that the Spanish university is wasting the opportunity to be a reference in research, a real testing laboratory, because as professionals it is complicated to access individually the most advanced fields in the use of new materials and techniques. In our guild there is yet another major contradiction: according to the Building Law the architect must innovate, but the reality of building imposes certain economic criteria and a distrust to implement what has not been tested before.

### **One last question: does architecture make sense if it is not built?**

Not necessarily. Although it seems the ultimate goal of architecture is to be built, there may be unbuilt projects that are much better than those built, or very interesting drawings, or thoughts and writings that are undeniably architecture, as in the case of Cedric Price, whose work is most interesting for us. Any drawing, any plan, any text can be architecture. Why not?



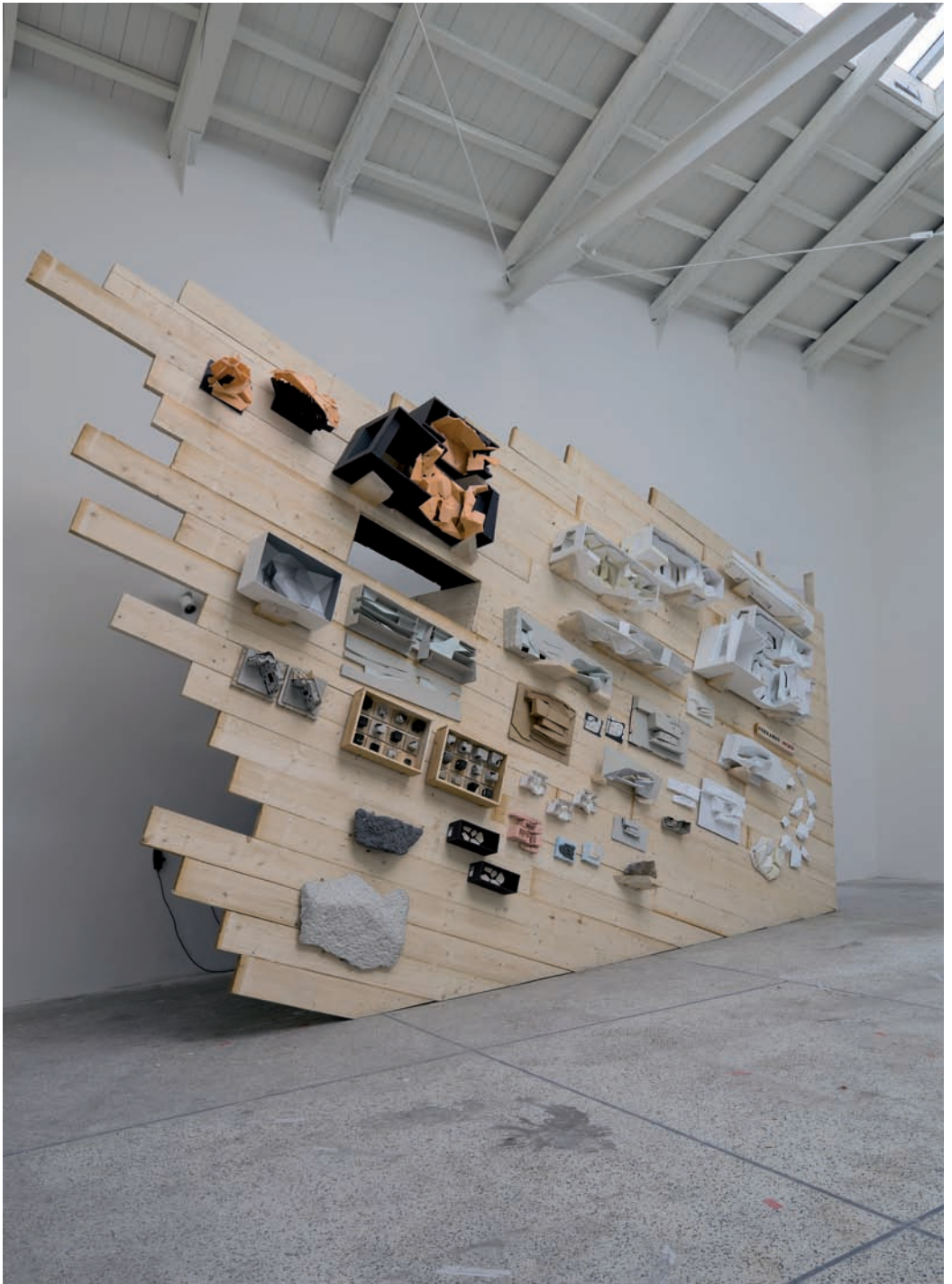


# *Snapshots*





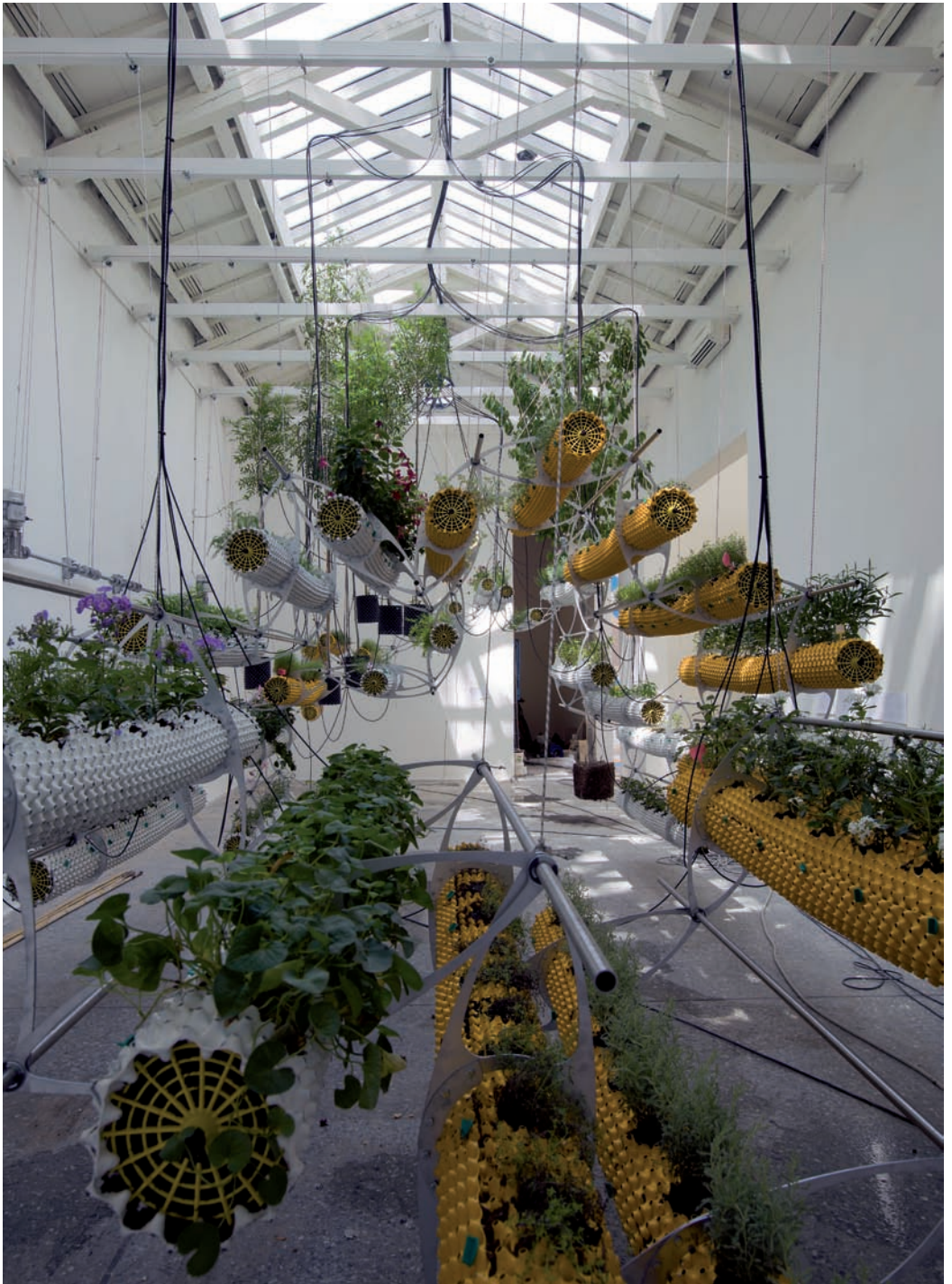
*SPAINLAB icon by Alberto Corazón*



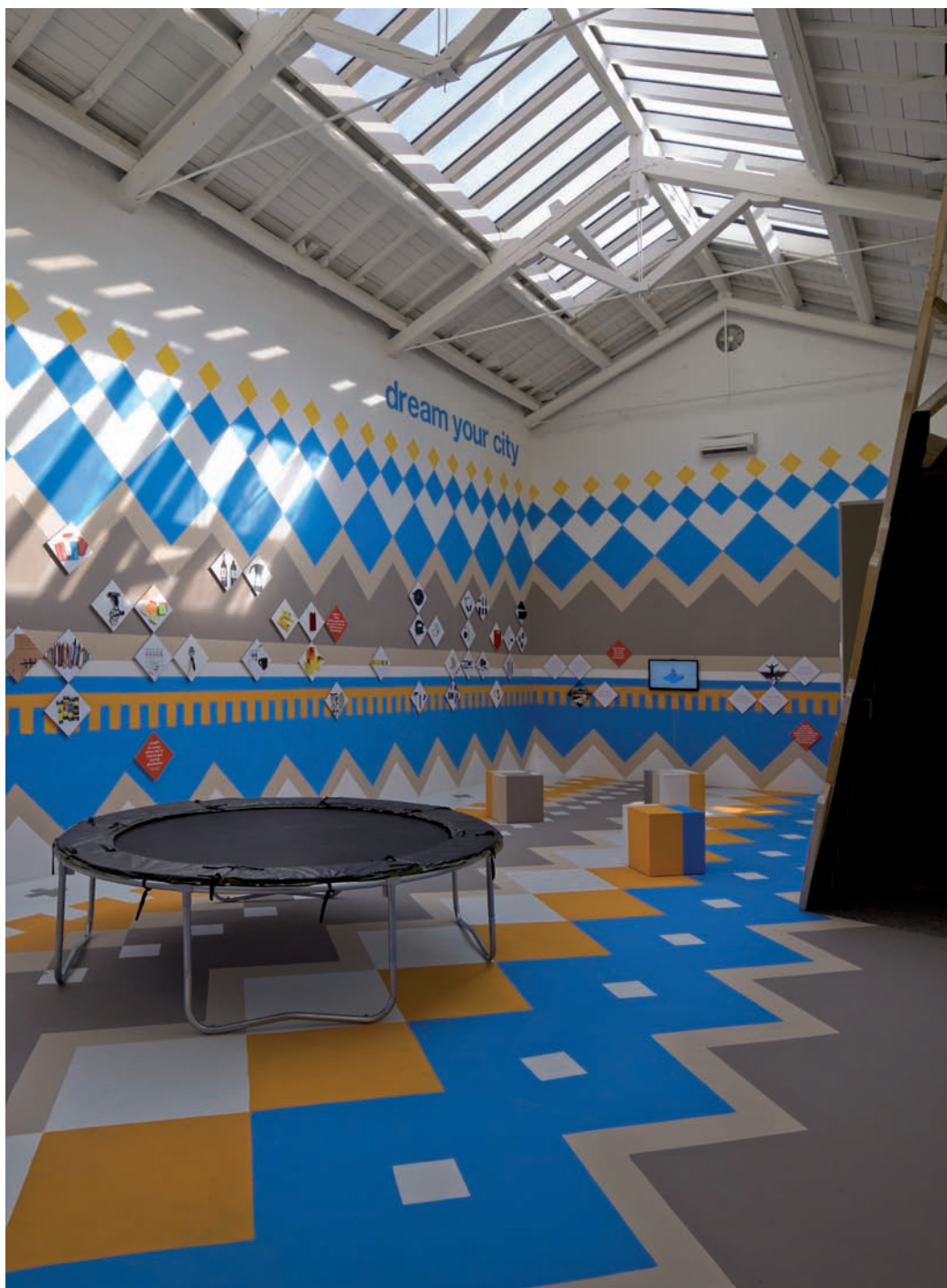




*selgascano from Menis Arquitectos*

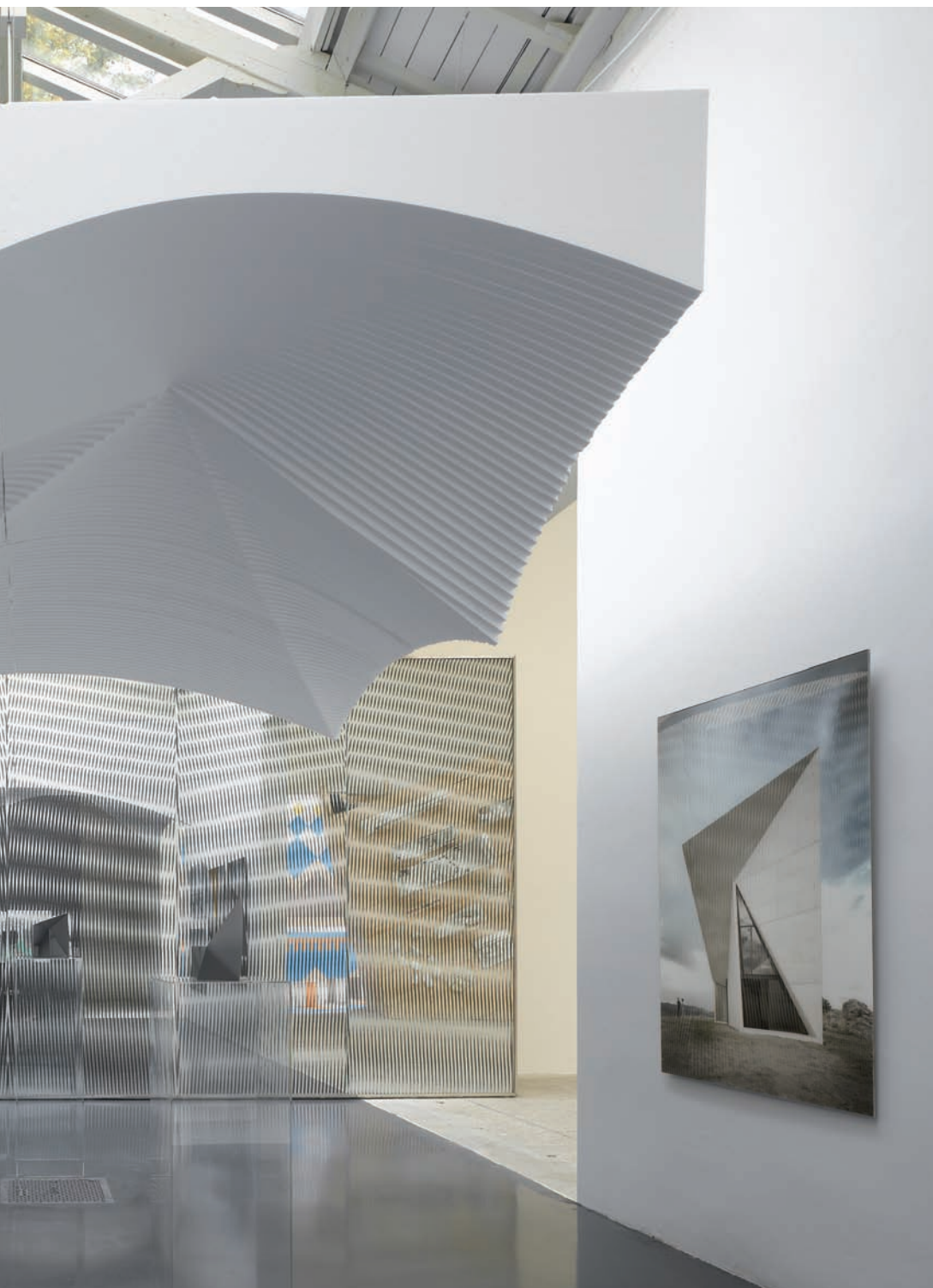














*Sancho-Madrdejos Architecture Office. Detail*







*Enric Ruiz Geli / Cloud 9. Detail*



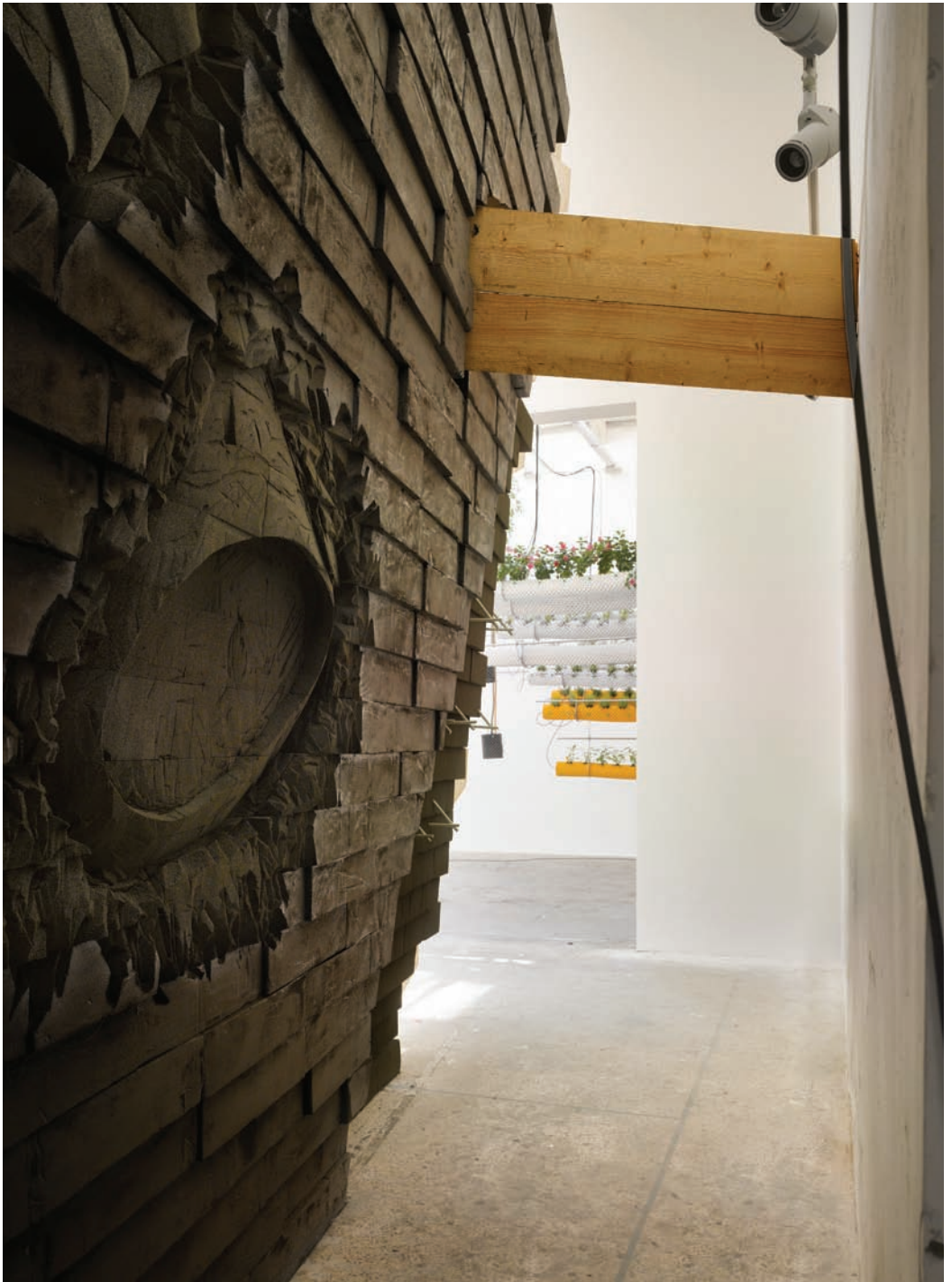






*selgascano from Menis and Enric Ruiz Geli / Cloud 9*







*Sancho-Madridejos Architecture Office*



*Ecosistema Urbano*

# *Rewind & Fast Forward*

*Past and future of innovation in Spain*





*Interview with Miguel Fisac*

Hans Ulrich Obrist

Co-director, Exhibitions and Programmes and Director of  
International Projects. Serpentine Gallery

## February 2001

[HUO] Can you tell me about how you started?

### Notes from the editor

<sup>1</sup> Fisac refers here, as he does elsewhere, to the Escuela Técnica Superior de Arquitectura de Madrid, where he studied (interrupted by the Spanish Civil War) until 1942.

[MFS] In 1942, when I got out of school<sup>1</sup>, the atmosphere in Spanish architecture after the Spanish Civil War was really very hard to handle. What was built at the time was a sort of imperial architecture and a whole lot of nonsense. Enough so for me to know, as I was starting out, that that wasn't the path I had to take... But what did seem like it could be interesting for me at the time was what certain Italian architects, the *novacentisti*, were putting forward for the exhibit that Mussolini was planning to celebrate in 1942. They departed a bit from the notion of rationalist architecture, although that hadn't really taken root in Spain.

[HUO] And in the 1940s you knew about how architecture was developing in Italy, and you know of people like (Pier Luigi) Nervi?

[MFS] Yes, I met Nervi. We were friends and maintained our friendship for many years...

[HUO] Did he come here, to Spain?

[MFS] He did, and he was able to visit the church I built. I still remember the conference he gave one afternoon. (Eduardo) Torroja introduced him. In my opinion, his structures were very good. They were different... Somehow you could see that he wasn't an architect, but an engineer, although at the time, in addition to engineers, other architects like (Adalberto) Libera and (Luigi) Moretti stood out in that same field.

With the Espíritu Santo Chapel<sup>2</sup>, I had the occasion to work on a design where one had to adapt to a pre-existing assembly hall. I thought that could be a good avenue because after the war there were no chances of working on developments with contractors, so I looked for a foreman and we started. I learned a lot about the construction work, and I really did what I wanted and I liked it. That strategy seemed very modern at the time, when the trade of architecture was moving in a different direction...

[HUO] Was Modern Architecture very little known in Spain at the time?

[MFS] Yes, and I think I was among the first... Before the War, the little that had been done by the most modern architects, like (Manuel) Sánchez Arcas and (Secundino) Zuazo, was on a

<sup>2</sup> In the Colina de los Chopos, in Madrid.

<sup>3</sup> Obviously, Fisac refers here to local surroundings. In Spain the GATEPAC (Group of Spanish Artists and Technical for the Progress of Contemporary Architecture), and certain works followed along the path of the functionalist current, such as the Club Náutico in San Sebastián, by Labayen and Aizpurúa (1929), which was included in the exhibit "The International Style", produced by Philip Johnson and Henry-Russell Hitchcock in the MoMA in 1932.

small scale and not very relevant<sup>3</sup>. The designs were correct, but very traditional. Until that time, I had thought that the Modern Movement had no value, because I didn't know it in depth. So after I finished the Chapel, although I met with acclaim from both the public and critics, I said to myself "This road is going nowhere". And I thought that probably the Modern Movement — known at the time as rationalism and functionalism—, led by Le Corbusier, Mies van der Rohe and Gropius, —who, by the way, worked in the Behrens studio in Berlin— oriented the path that architecture should take. During those years, taking advantage of the odd opportunity and with six or seven years experience as an architect under by belt, I went to visit and study the buildings designed by these modern masters *in situ*... Without any bibliography, naked, without anything. After that experience of going over the solutions in the most relevant designs of the time many times, I became aware that functionalism was just a manner of speaking, an interesting corpus, a philosophical notion that came from Gropius with the Bauhaus, but that it had nothing to do with the practice of architecture.

[HUO] When you began the Espíritu Santo Chapel in 1942, did you adopt a different modernity, like modernity's idea of "antimitation"?

[MFS] No, I actually thought that classical proportions are timeless, so to speak, and that they could encompass the baroque, neoclassicism, and a whole series of possibilities...and even their styling, which could represent the classical notion. And this is why I began an in-depth study of Italian classicism in the 1400s and 1500s, where that insight was found. Although I learned a lot, it didn't offer me a clear path to take. Continuing with my visits to the masters of the Modern Movement, I found two aspects: one was literary and propagandistic —Le Corbusier was a genius for that—and the other was a very simple structuralism, thanks to figures like Mies van der Rohe, whom I didn't think I should follow either... During the post war period in Spain, we weren't in the best predicament to build with the same elements that Mies did, steel and glass. And that architecture didn't seem very human to me either. Lao Tse, who I discovered during that period, used to say that four walls and a roof aren't architecture, that architecture is the air within them. And that's where my definition of architecture comes from, which is the humanized bit of air. And then what man attempts is for it to be beautiful as well. And that was the crisis I had with the Modern Movement... Since I didn't know which way to turn, I said "I'm not

4 Instituto de Microbiología  
Ramón y Cajal. Madrid,  
1949-1956.

5 Fisac made this trip between  
October and November 1949.

going to be the one to invent architecture now, so let's see where this goes". And just then, I was commissioned with a biology research centre<sup>4</sup> and I received eight thousand pesetas with what they were worth then to travel across Europe and examine other examples<sup>5</sup>.

[HUO] Can you tell me a bit about that trip?

[MFS] They gave me a letter of recommendation that I took to the Institut Pasteur in Paris, and to some laboratories in Basel and Zurich. Everything I visited seemed sensible to me: it was logical and fine. But when I reached Sweden I found an architecture that... It wasn't about vaunting modernity, but about doing things that needed to be done.

[HUO] Like Asplund?

[MFS] Like Asplund.

[HUO] Just two months ago, I interviewed Ralph Erskine in Stockholm...

Institute of Microbiology.  
Madrid, 1949-56

[MFS] I was also in Stockholm seeing what there was by Asplund, but when I travelled to Malmö by train, on my way to Copenhagen, I stopped in Gothenburg to visit the extension of the Asplund City Hall building, and I was enthused. There they called it empirism or neoempirism... When I saw it, with what I knew and had learned having worked in the profession for seven years, I was aware that that could be "the architecture of the 20th century", with a very serious stance, which didn't seem to be there in the other previous instances. If we talk about Asplund, although he wasn't a top architect, and he also died young, and although there were certain things that he didn't resolve entirely well, like the façade (of the extension) of the Gothenburg City Hall building, that interior of his fully convinced me. It tied in with that old, neoclassical architecture, with the courtyard that opens up onto a new area, and it emerges that way because it needs to be new, not like a preconceived style... I've come to reach the conviction that, in order for there to be architecture and for there to be art in general, there has to be knowledge and awareness and a subconscious involuntary factor in the person creating the work: a desire to express beauty.

[HUO] That part isn't rational?

[MFS] No, its subconscious. In a treatise by a German philosopher



from the 19th century on this issue<sup>6</sup>, the subconscious is considered essential. Now, in order for that subconscious to be able to emerge, there are two absolute pre-requisites. First there needs to be a desire and it needs to be expressed, and secondly, this must be done by a true artist, which is something that the person expressing the desire must not know. In other words, there needs to be earnestness. We could use as an example what in the 21st or perhaps even the 22nd or 23rd century will come to be one of the 20th century's great artistic undertakings: the airplane. As with cathedrals, it arose out of necessity. Did they realize, for instance, back in Gothic times, that they had invented a style? No, because styles emerge when they emerge, and then historians dub them with names. However, there's also a desire to bring about beauty in objects. I do what I feel and I believe I should do, and with my sensibility, I try for it to come out well.

[HUO] How important has drawing been in your work?

[MFS] It's something that helps the subconscious, but it isn't a parallel activity to architecture. I think it's important and I like it... But I always draw with a sense of drawing itself and with a plastic



dimension, and not as architecture. Does drawing get in my way? No, it doesn't. Was it hard for me to learn? It was, because I wasn't very skilled. And I find drawing fun, but that's a different story. I still remember how, as a coincidence, the first gallery owner in Madrid wanted me to be the last one to exhibit when he closed his gallery. The story goes further than that, because he died two days after I spoke to him, and his widow and sons became further convinced that they wanted me to exhibit. And I was successful. I sold paintings, although the prices weren't cheap... because in the prostitution of art for money it's fundamental, and if something is sold at a low price, it means it's not worth much. I often say that if Miró's paintings were sold at five hundred pesetas, no one would buy them.

[HUO] Did you establish contacts in the art world at the time, like dialogues with artists or joint projects?

[MFS] I did. Thanks to that experience, two of the most important sculptors of the time, José Capuz, a former member of the academy, and Pablo Serrano, a very good expressionist, worked with me. There are others as well: Adsuara, the sculptor, and Ramón Stolz, the painter, both highly acclaimed, with whom I worked on the Espíritu Santo Chapel...

[HUO] You built it in 1942...

[MFS] It was my first work.

[HUO] A bit later, in 1947, very nearby, you built a library on the calle Serrano<sup>7</sup>. Do you consider that design to be evolutionary for you?

[MFS] No, not at all. The idea was to remodel an important room in the Council<sup>8</sup>, where there were beams that were falling out of place. To dignify the space and regenerate a certain sense of unity, I designed that ceiling. I had never intended to impress, although afterwards they gave that ceiling a value that I don't think it ever had. I identify much more with the shop beside the Hotel Palace<sup>9</sup>, one of the first designs I was able to build.

[HUO] But in the library you also took care of the furnishings...

[MFS] That's right. For a very simple reason. I had to, because that the time, what was available on the market was unacceptable. You

6 Fisas is probably referring here to *The World as Will and Representation*, by Arthur Schopenhauer.

7 Sociedad Hispano-Alemana Goerres library. Madrid, 1947.

8 When speaking of the 'Consejo', Fisas is referring to the CSIC, the High Council for Scientific Research. This institution owns several buildings in the Colina de los Chopos area, where Fisas built his first works.

9 CSIC library. Madrid. Calle Medinaçeli, Madrid, 1950.

10 Sociedad Hispano-Alemana Goerres library. Madrid, 1947.

finished the work very carefully to maintain a certain harmony, and then they saddled you with gilded or Elizabethan furniture... So to prevent that from happening, I started to design the furniture free of charge, also taking care that the carpenters built it without charging. This is the way I got them to allow me to do it, and that's how I got to take care of the furnishings, even in my own home... I always just went ahead.

[HUO] The first time you built furniture was in 1948. It was called the *Serie Estructural* (structural series). Could we talk about that concept? How did it take shape?

[MFS] When I was commissioned with the library<sup>10</sup>, I envisaged designing some chairs, tables and bookshelves. With everything I researched, I drew up a little theory about the structure of the furniture. Actually, furniture has two aspects. One is structural, that is, the furniture needs to be able to stand, and the other is adaptability of usage, whether the piece of furniture is there to hold books or the human body. If I think of the human body and look at, say, the armchair in front of us, I see that it simply serves to sit on or support oneself. But what's the thing about it? First of all, it's low, because the convenient thing is for us to sit down with the appropriate part of the body, our gluteus, our derrieres, since there are no blood vessels there, just muscles with a minimal amount of blood irrigation... This explains why village people, or women, spend so much time sitting down (for instance the women in Almagro when they make their lace), and have such low chairs for that, so that the circulation in their legs isn't hampered. This story about the furniture shows how I've always done my own thing, sometimes in parallel to what was done in Spain or abroad, and sometimes not. I've always shown a great deal of respect for the brief I'm given. What interests am I there to serve? What are the conditioning factors in the brief? And that's what I base my first flow chart on.

Relationships with clients have always been easy for me because the only thing I attempt is for the client not to get into my field. If someone would say to me "I want you to make a single family home for me, following along in the English style" I would say, "Look, find yourself an Englishman or someone to copy that. I don't do that kind of work." But it they would say to me "I want rooms for such and such a purpose, or separated in such and such a way", I would follow along and would be interested. Because the indication

Goerres Foundation  
Library. Madrid, 1948



of those needs can improve the preliminary sketches, and that's something I appreciate and take very much into account.

[HUO] I have a question about architecture and life.

[MFS] Life and architecture.

[HUO] Life and architecture. Do you assert that architecture improves life?

[MFS] That's the way it should be. I've studied traditional (folk) architecture in depth and I've realized that it's always good. Because it stems from a need, not a whim. One of the issues that I also took note of in the architecture we said was from the Modern Movement is that it entirely ignores its surroundings. It cancels them out. Mies van der Rohe, whom I consider to be the most important architect of the 20th century, built office buildings in Santiago de Cuba (for Bacardí) and a contemporary art museum in Berlin, without the location making a difference. No, that can't be! Architecture is rooted to the ground like trees are.

[HUO] What is the importance of context for you in your work?

[MFS] It's there to comply with the conditions in the work commissioned and to respond to the peculiarities of the location. If I'm commissioned to build a single-family home in the Pyrenees<sup>11</sup>, for instance, then I'll respond with certain materials and certain enclosures for a place where it's going to be snowing eight months out of the year...

<sup>11</sup> Casa Fisac. Canfranc, Huesca, 1959.

<sup>12</sup> Actually, during those years, Fisac built four homes in Majorca: Casa Fisac, Casa Goizueta (both built in 1961), Casa Fanjul and Casa Magaz (both built in 1962).

[HUO] And also to the local economy and materials.

[MFS] Of course. At that same time, I built Fanjul<sup>12</sup> in Majorca, and it is an entirely different concept from the Pyrenees.

[HUO] So then it's not a question of formal style, but rather of adaptation...

[MFS] Adaptation to surroundings reflects a concept. This idea is what even further confirmed for me that the Modern Movement was not right, because you can't build out of sheer formalism. Although the movement's philosophy seems convincing, in practice what it applies is a style. But when I analyze the different historical styles in the West, I see they respond to a given context. Greek architecture was based on the need to build the right temples for the gods. Because the gods were anthropomorphic but represented supermen. They required temples that were more "elevated" than the homes of common mortals. It was the traditional Greek house with four walls and a two eaved roof that was elevated to a higher category. And each one of those houses, of those temples, is different. Then came Vitruvius, who took that and shaped it ingeniously, and that's where the architecture of the 1400s and 1500s comes from... The Romans pooled from that architecture, but it was no longer spontaneous like what emerged in Greek art. Instead it's a theoretical reduction. And that has to do with the empire, with the desire to Romanize the territory. The meaning behind the architecture is no longer a human need, but instead a political one. Some time later, after the Dark Ages, there was a desire to go back to architecture like Roman architecture, and barrel vaults were built with no buttresses and of course they fell down. And that's how, without any direct intention, the Gothic emerged. That was a true style because it stemmed from the need for the barrel vaults not to fall down... Let's talk about Hegel! I'd like to go back to Hegel's concept of *style*. Hegel said that style is linked to form. Because although in the beginning there is style, it then generates form. In an initial symbolic period, with no material means for expression, symbols were used and communication was a bit stammered.

Then things evolved until the time came when there was a balance between idea and form. The advent of the classical period of that style came. But form continues to evolve, although the origin is always the same. This period is known as the romantic period, although we could also call it decadent... the Gothic style, for instance, would be Plateresque. All of this came with the

Renaissance, and it then reappeared with the Modern Movement. Now, what period of the Modern Movement are we in now? Simply at the very end where, because we have a culture and knowledge and a series of materials and possibilities, we end up building the Guggenheim in Bilbao. It's the social expression of a time, a true blunder. But it marks the period, not the architect... The society we live in now behaves like an unacceptable monstrosity, and the result of all of this is a case like the Guggenheim. In this sense, expression is a work of art, because it is the expression of the spirit of this period.

[HUO] Have you written about these theories of yours?

[MFS] No.

[HUO] What importance do you attach to writing?

[MFS] Writing has always interested me. I've written a lot in the press...

[HUO] I've also seen manifestos.

[MFS] Yes, but I think the manifesto is too pompous. I was referring to the fact that I did write criticizing the disaster Madrid was to become, and already is.

[HUO] Is that a book?

[MFS] No, I've ruled out the idea of a book. What I have to say, I've said by writing twenty-five, thirty or... more, about fifty articles for the newspaper *ABC*.

[HUO] And you don't have a book with all of your articles?

[MFS] No, I have a book with some of my articles. Back in 1948 I already had the idea that, in Madrid, the ones who came after us would curse us. The architecture in this city is a total disaster, and they want even more. And do you know why? Because instead of serving society, many architects are servants to money. It's a form of prostitution...

[HUO] How did you begin in the social, utopian and human dimension of architecture?

13 *La molécula urbana. Una propuesta para la ciudad del futuro.* Madrid: Ediciones y Publicaciones Españolas, 1969.

[MFS] For me, cities are spaces to live and coexist, and they fundamentally should be safe places. But they've become just the contrary: places where people live miserably, where you can't coexist, and where it's not safe. The result can be catastrophic.

[HUO] And how do you see a city like Madrid now, in 2001, in a period with a hypercapitalist economy?

[MFS] What I see is that there's no solution... We're going to have to pay dearly for many bad decisions. Ecology will fix things, but through earthquakes, floods and disasters, and since yesterday through new wars declared by the United States. I'm well on in years, but I look upon youngsters sadly. If they told me now to go back to being a fifteen year old, I'd say no... I've lived my century.

[HUO] If we talk about architecture and its ecological dimension, I can think of very interesting cases, like Ábalos & Herreros's approach, like recycling...

[MFS] Yes, I know them, but I don't have much faith in recycling... There are things that can't be fixed. And one of them that certainly can't, and I've attacked this once and again, is density.

[HUO] Density?

[MFS] I'm referring to the density of inhabitants per hectare. In a little book I wrote in the sixties I dealt with the issue as part of a theory on cities...

[HUO] Are you referring to *La molécula urbana*<sup>13</sup>?

[MFS] That's right. There I spoke about war and cities... I remember that while I was writing it, they were building a place in Finland that had 27 inhabitants per hectare. And in my book I made the statement that you couldn't live like that. And that was indeed what turned out to be. But we can't live like we do today either.

[HUO] So what's the solution?

[MFS] Everything has to have its *raison d'être*. That's what I called the *molécula urbana* (urban molecule). Back then, in the Franco days, I decided I could afford to speak of what those urban molecules could be, simply places to live and work, able to meet all the needs of large



city, like a university, museums, places to hold concerts, a major hospital... in other words, everything you need, without borders or frontiers... But as the number of inhabitants increases, managing things becomes more complicated and, once you go beyond a certain limit, the result is completely negative and disastrous.

[HUO] What kind of relationship do you have with scientific issues? Do you engage in dialogue with scientists?

*La molécula urbana*

[MFS] Yes, I have had a direct relationship because I've built many CSIC buildings, but I haven't engaged in dialogue about architecture. I really do have a fault and that is that I've been very independent, and also very much of a loner. In fact, I've done everything on my own. I never felt inclined to teach either, although I was encouraged to do so. The sum of all of these factors left me very isolated.

[HUO] Today, in 2001, what are your projects?

14 Miguel Fisac Theatre and Library. Castilblanco de los Arroyos (Sevilla), 2000.

[MFS] I have a few minor commissions. I'm finishing a cultural centre in a village in the province of Seville<sup>14</sup>, and I have another underway with some youngsters —two lads and two girls that came to my studio and proposed we work on something together— after we won the first prize in a competition in the town of Getafe together for a project we're starting in two months.

There's a certain novelty in this project because we attached a lot of value to concrete as a building material. We understood it to be a respectable material that doesn't need to be clad, that should be left as is. The first building that was built in Spain with exposed concrete —at least in Madrid— is a design of mine: Laboratorios Made<sup>15</sup>.

15 Laboratorios farmacéuticos Made. Madrid, 1960-1967.

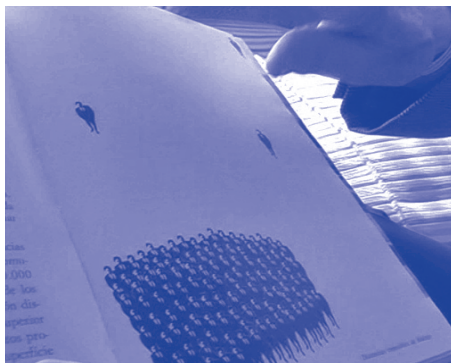
Then work continued with pre-stressed concrete.

And now I have the opportunity to build concrete structures that have never been used before in Spain because there were to means to do so... I've just found a company able to produce sixty-metre long by four metre wide concrete beams that I'll use in the sports complex.

[HUO] Getting back to molecules, since you deal with very organic elements in your work... Could one speak of organic modernity?

[MFS] Yes.

[HUO] Are you referring to Northern Europe?



[MFS] I am. Before I mentioned that they called it neoempirism, but actually, it's organic architecture, which Asplund began and which Fernández Alba then continued, but these are historians' terms. It's less rigid, less geometric, less formalist than the Modern Movement whose architecture never quite fit in. But in the Nordic countries, with those extreme temperatures of 30 or 40 degrees below zero, they're forced to be more rigorous with their architecture.

[HUO] That reference to northern Europe is also interesting in terms of materials. I'm very interested in the use of bricks in your work.

[MFS] Back then there was nothing else to use. But then I moved on almost exclusively to concrete because it had qualities that hadn't been fully developed until that time, and I felt it would be interesting to try them.

I patented many of my ideas at that time, but I'm not business minded, and actually it really wasn't of much use to me... like architecture with flexible formwork. Later I also worked with pre-stressed and post-stressed architecture. I still don't know why architects don't use it because what's known as high tech architecture now was actually invented in the 19th century, in Eiffel's days. I think it's wrong and not very honest to present it to us now as if it were a great novelty.

[HUO] Who were the inventors of the 19th century you were referring to?

[MFS] Those in charge of the 1851 Exhibition in London and then later the Eiffel tower.

[HUO] They were engineers!

[MFS] They were. Now they work with pre-stressed concrete, which is

different. If the Eiffel tower is still around it's thanks to continuous maintenance, parts are replaced little by little... Otherwise, it would fall down like the Pompidou. I still remember when they built it and it was presented in the media as a great technical innovation... What kind of technical innovation was that! Far from it! It formalized what *Archigram*, an English review, had already presented, and technically it's a descendent of Eiffel. And now, after just twenty years, it's in ruins. They repair it on the sly so that people don't notice and so that it doesn't lose its great impact, it's 'new' aura. Now it's true it hasn't lost that in twenty years, but the building itself is lost.

[HUO] We have a new tie-in here between Nervi and engineers. Did you know Félix Candela? Were you friends? A year ago I was in Mexico and I visited some of his works ...

Made Pharmaceutical  
Laboratories. Madrid,  
1960-67

[MFS] Yes, we were friends. I had a close relationship with him between 1930 and 1932, when he was a Spanish ski champion, because I also skied at the time... Back then I was just 17 or 18 years old. I was with him at a conference in Mexico, and while he showed me his works, he told me about his whole odyssey, because they didn't treat him very well there in Mexico. But because he was connected to left wing politics, he had to leave Spain. In order to survive, he worked with Luis Buñuel playing minor roles in cinema. And because he had studied in Madrid's Escuela de Arquitectura with Eduardo Torroja when he taught Structural Analysis, he rented a plot of land as if he were a brother of his to do testing on concrete sheets. He later started a concrete structure company that made structures that he himself built... and that's how he made a living<sup>16</sup>. At an international congress in Chicago<sup>17</sup> he presented all of his experience and went on to become an international figure. Until then, all he had done was minor commissions. He even made a living by doing structural analysis for other architects.

16 Fisac is referring to Cubiertas Ala, the company that Candela established in 1950 with his brother Antonio and sister Julia and with the Fernández Rangel brothers.

17 Fisac seems to have fallen victim here to confusion. Candela presented his work at M.I.T. in 1954. But he was made Full Professor at the University of Illinois in 1972.

[HUO] And then, when Candela was in Mexico, did you stay in touch?

[MFS] Although we didn't speak to each other, each one of us respected what the other one did in his field. While he worked with sheets, which is what led him to that patent that he used so often in hangars and also to very inexpensively cover wide spans. I was doing something very different. I was working in architecture...

[HUO] But in your work, there's a clear relationship between architecture and engineering...



[MFS] Although engineers calculate what I need, I have enough of a technical training to be able to invent what interests me. For instance I remember a tower that I designed with sixteen fifty by fifty pillars, and the engineer told me “You can’t calculate this”. To which I answered “If you couldn’t, I wouldn’t have put them there, so if you don’t know how, I’ll find someone else”.

[HUO] An architect and also an inventor.

[MFS] That’s right. That’s how I got the calculator’s goat, and the tower’s been there for forty some odd years... And I know where the tensions are (in a structure), so I can come up with solutions and know that they can be built. I couldn’t have built the Getafe sports complex I mentioned before until now not only because there were only post-tensed solutions available, and no builder had the means to do it. The company we’re working with now has two five hundred ton cranes, and they’ve insured me that we can put together the envisaged sixty meter pieces as long as they can travel on the motorway. Getting back to the relationship between architecture and engineering, I do think that everything goes back to the same concept: they make their bridges and roads, and I do my architecture.

[HUO] And what’s your relationship with materials like? You say that “the association of aesthetics and practicality of materials lies at the root of the solution”...

[MFS] Reinforced concrete is a solution that's been sought for centuries. Back in the fifth century B.C. people were trying to make a material that would be both tensile and durable, because wood, which has its properties, rots. Concrete is highly resistant to pressure, like stone is, but stone fails in terms of flexibility (traction), but if you introduce steel into concrete, it works perfectly... This is simply the result of my 87 years of age and Freyssinet, the French engineer.

[HUO] Did you work with (Eugène) Freyssinet?

[MFS] Not with him, with his invention... It consisted of the fact that reinforced concrete withstands compression on one hand, and traction on the other thanks to the reinforcement. But when that iron is at work, so is the concrete, where microscopic fissures break open. What Freyssinet thought was: if I put in cables whose tension is greater than the tension they'll normally have to withstand, the concrete will always be compressed. So it's about pre-stressed structures. That was Freyssinet's main invention, that before there is weight bearing on the beam, the reinforcement has to be at work. And that was how he found that ideal material the Greeks had been looking for. There can be traction, but the material is also durable. There are actually very few pre-stressed buildings made with this in mind this way... I don't think there are actually any of the size we're going to build in Getafe. I can't understand it, because inventing the system would be more or less difficult, but once it's been tried and tested... I don't know why architects have done without this material. Right now, 95 % of engineering works are pre-stressed.

[HUO] Another landmark of invention in your work is the embracing of very innovative textures ...

[MFS] One of the issues I've always been concerned about is how to confer aesthetic expressiveness to concrete. I did a series of work where I attached a lot of importance to the form, which was wooden. Then, with the Centro de Estudios Hidrográficos<sup>18</sup>, I learned to do formwork so that you could see the grain of the wood. The result was very good, but it wasn't the concrete's own texture. It was simply the texture of the material used for the formwork. I wondered what qualities of its own concrete might have, and I thought it was a material appropriate for plastic work, it was soft and then hardened. I sought how to reflect that plasticity, which type of formwork should be used for that... I did a test placing plastic on a

Post-stressed beams load testing. Center for Hydrographic Studies. Madrid, 1960-63

18 Madrid, 1960-1963

19 Fisac is referring here to the Centro de Rehabilitación Mupag (Madrid, 1969-1973), which marked the beginning of a period in which he used flexible formwork. Fisac's own studio in the Cerro del Aire (Alcobendas, Madrid, 1971) was built using this system.

20 Competition organised by the Madrid Architect's Association (Colegio Oficial de Arquitectos de Madrid - COAM) in 1950.

wooden structure and I found that the surface became shiny, clean and smooth, extraordinary. So I started to work with that system of formwork. After my first building with that kind of formwork<sup>19</sup>, others followed, like the Tres Islas hotel in Fuerteventura... And now the theatre in Castilblanco de los Arroyos, in Seville, and the Getafe sports complex.



[HUO] They're not tri-dimensional or bi-dimensional, there's a certain oscillation.

[MFS] Yes, there's oscillation. You can leave the place that the plastic is going to be more or less open, depending on the depth you want.

[HUO] Apart from your work that has been built, could you talk a bit now about the utopian dimension of the designs of yours that have not been built, about utopian or censored designs?

[MFS] Since I graduated school as an architect, I've considered my main task to involve housing. That's always been the *leitmotiv* in my career. In a competition organised by the Architect's Association in the middle of the last century, I came forward with a solution that I called "las casas en cadena" (linked houses), and I explained how those inexpensive houses could be built<sup>20</sup>. At that time in Spain we were in a situation where we had nearly nothing. And



although I won the first prize, I wasn't able to carry it out, in other words, that was the first design that went down the drain... But I've always maintained my interest in that issue. I've even studied the prefabrication of housing in Russia, in Czechoslovakia..., throughout Eastern Europe, and I've worked with colleagues from the Instituto Torroja who, after maintaining close relations with engineers and architects in Moscow, taught me how that did that.

[HUO] When were you there?

[MFS] In 1968? No, I think it was in '64... I had offered my pre-stressed patent to Russia and they replied in a letter that it would be advisable to discuss it in person, and that was how I was able to get a passport and travel there. And also to France, where a lot of prefab work had been done. We have to remember that prefabrication is done with very large, heavy components that have to be moved with large cranes, with a tremendous amount of constraints, until they are arduously assembled. And this is all because concrete weights a lot... But what if we built everything else and didn't pour out the concrete? And what if, for instance, I built formwork and did that with panels I can leave there and I leave all of the facilities I need so that I can pour the concrete in there, on site...? What needs to be done then? Change the process. The formwork needs to be placed on one side and on the other, then the concrete gets added and the work is finalized. Two months ago they gave me the definitive patent for that system... Now all that needs to be done is implementation. This will probably be my last failure, like the first one, the linked houses.

[HUO] Do you think your work hasn't been well enough understood by the government?

[MFS] No. What you do as an architect are designs... I know the materials I need to deal with. Architecture is a compendium involving a need to know a lot of things, and one of the most important things is structure. I don't do calculations and I'm not interested in indexes, coefficients or programming... I was working long before the regulations came in, and everything I've built falls outside any type of regulation. Why? Because building a hollow structure with a twenty metre span that's a centimetre and a half thick is unthinkable today, but there it is. Right here in the Colegio de la Asunción<sup>21</sup> there are structures like that. Now, with pre-stressed, you can take things to even further extremes.

Getafe Sports Centre.  
Madrid, 2003

21 Colegio de Nuestra Señora  
de la Asunción. Madrid, 1965.



[HUO] Getting back to that housing that was never built, some of the ideas remind me of Buckminster Fuller, who spoke of housing as a service and not as apartments...

[MFS] It is a service, of course, because we need limited space and the exterior is adverse.

[HUO] Other than architecture, could you tell us about your work as a painter?

[MFS] I've always liked to paint, although it hasn't come easy to me. But because I failed drawing four times, the professor, who did not sympathize with the way I drew, was determined for me to learn to draw properly. Later I painted for enjoyment, and I still do. Over all of these years, I've evolved a bit, particularly during the periods I was able to paint because I had no work... I could even say that I invented a way of painting, which might sound a bit strange. I paint horizontally. I like painting very elaborate things, like the Plateresque and florid Gothic style. Even though I find them horrid in architecture because I'm interested in simplicity, I enjoy them in painting.

[HUO] What opinion do you as an architect have of museums? Have you designed any?

[MFS] I've never been commissioned with a museum, but the fact that they're now architecture's starring features, so as to put it, is

an indication that we're looking backwards and not forwards. Do you understand me? By definition, museums are places to conserve everything that could be lost. They're old age asylums for invalid works of art... because painting a picture to hang in a museum is nonsense. It indicates it serves no purpose at all.

[HUO] What are your favourite museums?

[MFS] The Prado, then the Prado and finally, the Prado. And then there are others... I've seen them all. The Louvre is frankly very good. But it has six or seven, as the Italians call them, *capolavori* (masterworks). The Prado has at least thirty. Another absurd idea is extensions of museums, like the Prado, in order to include conference halls and I don't know what else... In the Prado, in the first place you have to see Velázquez, because there are only two important paintings of his that are not in the Prado: the portrait of Innocence the 10th, in a museum in Rome (Doria Pamphili), and the Rokeby Venus in London (National Gallery).

22 Actually, the Casa Fisac in the Cerro del Aire, to the north of Madrid, was begun in 1956 and over the years was expanded once and again. One noteworthy extension is the studio. Fisac used his own home as a testing ground for his material inventions, like flexible formwork.

[HUO] We are in your home, which is also a painting studio. Could you tell us the story of this home again? It's seen ongoing evolution, because at first it was small, and then?

[MFS] I added things according to the family's needs, but it was a very simple home made on a very low budget<sup>22</sup>. The only luxury it has is the wood on the ceiling, that's it...

[HUO] One last question. How do you see the future of cities? Before we were talking about the present...

[MFS] Cities are made to make money, just like war... Yesterday a war began.

#### Acknowledgments

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*Of Diaspora and Conquest:  
The Spanish Pavilion,  
Venice Biennale 2012*

Nader Tehrani

Head of the Department of Architecture at MIT SA+P

The event of the 2012 Venice Biennale coincides with a unique historical moment—a moment when Spain is enjoying the intensity of a cultural high-point while it is simultaneously exposed to an unprecedented vulnerability that threatens to uproot the stability of its foundations.



Some thirty years after the demise of Franco, Spain has surged as a significant force, its democracy being the manifestation of the collective voice of its many individuals, working in tandem to create some of the most progressive cultural and political movements of the contemporary era —gay rights, union by-laws, among other legislative accomplishments that not only mirror our times, but in fact proactively set in motion certain precedents for other nations to emulate. The architectural counterpart for this progressivism found its voice in the 1970s and 1980s, extending the Modernist Project, radicalizing it at a time when the rest of the Western world was rediscovering ‘history’ in the guise of ‘post-modernism’. As the skylines of some of the most wealthy economies of the time were being marked by resurgent icons of antiquity, in gestures both grave and comic, Spain collected its thoughts with a somewhat cool and complex restraint. Already engaged in the history of its cities, the urban complexities of its historic cores, the emergent challenges of its peripheries, its terrain vague, and the realities of the building industry, its confrontation with ‘history’ was at once profoundly deep-seated, but also brutally real —leaving little room for sentimentality. Spain was, in fact, focused on liberating itself from its most recent history; to exorcize this past, Spain not only needed to look forward, but also to re-examine the irreducible aspects of the architectural discipline as a way of demonstrating how architecture can become a cultural artifact that has the potential to produce new forms of knowledge. It did this with a dual agenda: to demonstrate that the discipline needed to engage the social, political, and economic dimensions of cultural life, but that it also needed to articulate that its ‘medium’ was a vital part of that engagement, inventing architecturally through mechanisms of urbanism, infrastructure, typology, construction, and even the details of specifying phenomena.

In reconstructing Spain in a post-Franco era, the country essentially had to re-enforce and in some cases launch the very institutions that would need to transition from a centralized authority to the shared responsibilities of a democratic state. If Franco’s project had been to enforce unity where there was none, the post-Franco era had to come to terms with a democracy that could tolerate the idea of “differences” in a state that required consensus to operate.

Not lacking its own significant voices of the Modern Era —among them De la Sota and Oíza, both of whom contributed to the grand traditions of modernist thought, Spain also had a variety of other

voices that did not fit neatly into the pre-established categories of its time. Figures such as Fisac, Higuera or Torroja generated a series of visions, practices and protocols for architecture that spoke to a form of individualism that escaped the orthodoxy of modernist practices, albeit with a measured understanding and address to its public mission. Strangely, in rebuilding a public discourse in the 1980s, the formal manifestations of Spanish architecture re-indoctrinated the canons of modernism, with the re-fabrication of the Mies German Pavilion as its mantelpiece. To the outside world steeped in the debates of Aldo Rossi, Colin Rowe and the Krier brothers, this was seen as a deliberate confrontation with the dominant discourse of the time, liberating in many ways. However, ironically, if measured by the more heretical protagonists of Spanish modernism, this was in fact a retreat from the kind of research, experimentation and speculation so characteristic of the Fisacs of the era just prior; this was the beginning of a kind of new orthodoxy in Spanish architecture.

Notwithstanding, what fueled the Spanish resurgence was an unprecedented investment in the country's infrastructure, housing and institutions leading not only up to the 1992 Olympics, but extending beyond into the new millennium. This portfolio of work, while provincial in its investment, spoke to an architectural discourse that was global in reach —what many students of the West viewed with yearning and jealousy, not only because of the quality of individual works, but the promise it suggested that architectural discourse could seal a social contract binding the autonomy of the discipline's instruments and techniques to the very political and social practices that can transform reality, the city and its society. Today, as we look back on this work, the borrowed money and the debts incurred, we can only be in awe of the consistency and rigor of this “body” of work —the evidence that, beyond dubious fiscal practices, an intense and focused discourse was built, one that produced strong conventions, shared debates and a consensual platform from which ‘difference’ was constructed. In turn, this was a measure of its democracy, using a collective platform to gauge individual agendas.

From the American perspective, where democracy is cast in terms of the rights of the ‘individual’ —and where today any reference to the collective is slammed as socialism— this body of work was not only mythicized in the halls of academia, but also summarily confronted in the trenches of practice. Let us not forget that

one of the paradigmatic terms of urbanistic discourse today, the “Bilbao Effect”, owes its debt to America’s most vocal protagonist of individual expression. The Guggenheim franchise attempted to address urbanism, the economy, the construction industry and architectural discourse all through the singularity of one architectural artifact: a protean icon, but not indestructible.

Fast forward: the global economy crumbles and Spain finds itself at the center of a delicate balance, immersed in economic circumstances in which it was both perpetrator and victim. As the current generation contemplates its options, the global stage is the only recourse for many; China, Korea, Taiwan, among other markets in Asia, offer some of the more immediate remedies of hunger, albeit with compromises at total odds with the disciplinary rigors to which Spanish architecture has become accustomed. Other alternatives have also formed in the Americas, both North and South. After four hundred years, a rediscovery of the New World offers a new way to see this diaspora: less as a reckoning with compromise, but as a promise for new conquests. A captive audience awaits this generation—but a generation whose main production may not be buildings, but architectural discourse. Let us not forget that this is not the first generation of Spanish architects impacting the new world. Just within the modern era, figures like Jose Luis Sert and Rafael Moneo have set important examples—not only of how Spanish culture has been imported, but also how architecture knowledge has been transformed through their eyes due to their new context. For instance, the concept of “urban design” as it has been coined is arguably a unique invention delivered by the American Sert. Moneo, too, brought a far wider debate to American pedagogy beyond the reductive discourses of postmodernism in which it was entrenched.

In the North, with Princeton, Harvard and MIT at the forefront, other institutions have also come to terms with the wealth of intellectual assets that is at stake in the importation of this generation. Of these institutions, MIT has a history that resonates in a unique way with the agendas of this generation. With a pedagogy bridging the culture of arts, science and technology, its main contribution to architectural culture has been in the form of research, speculation and experimentation—the very attributes that are the centerpiece of the 2012 Spanish Pavilion. Maybe it is no coincidence that its curators, García-Abril and Mesa, are at once key protagonists in the current Spanish scene, but also the leaders of the

POP lab at MIT. Their own brand of work, steeped in the realities of construction practices, is also demonstrative of the model of curatorship they have advanced: less invested in a school of thought, a style, or a movement, but a dedication to the intensity of research, focus, and individualism that can only emerge from the strength of a collective discourse. García-Abril and Mesa have brought together seven individual teams of vastly different focus, each of them masters in their own domain; fiercely independent, each has developed an intellectual pedigree of their own, apart from the very Spanish culture which binds them.

What will in a few years be defined as a brain-drain from the Iberian Peninsula, will in all probability be a new chapter in the exploration and speculation of this generation —less of an escape from the homeland, but the opportunity to advance their research in the New World, and perchance to demonstrate its relevance upon return —*¡Ojalá!*

This book is just the beginning.  
Innovation continues here:



# *Snapshots*





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**Spanish Pavilion**  
13th International Architecture Exhibition  
La Biennale di Venezia, 2012





