

## A PROFESSIONAL MATTER

**AN INTIMATE WAY TO ENHANCE BUILT ARCHITECTURE**

### **TFG GArqEtsab (2014 plan)**

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1: Cactus. Jose Antonio Coderech de Sentmenat

### Summary

**Key words: Project process, architect, ideas, matrix, concepts, perception, circulation, configuration.**

A professional matter: an intimate way to enhance built architecture” pretends to be a research project that gets close to architect profession to know better its basis, its work methodology and how it develops what defines it, architecture.

It is going to go be in depth on doing and building architecture and it is going to be seen how these two ideas relations to each other from architect’s hand who links the fact of building and thinking about the project.

In addition to the theoretical framework approach of the architect’s task, “how” and “what” is done will be analysed, ideas directly related to the project process which is a method that the architect uses to suggest the approaches of different projects.

Once these basic ideas are defined, they will be used to generate an analysis matrix that joins several concepts that will be useful to understand better this project process. This matrix searches to become a personal tool to analyse projects, separating those more significant or primary ideas that end up defining and making the project, in general terms.

To verify that the concepts that are part of the matrix are valid to explain some project process aspects, they will be tested by means of the analysis of the following projects:

- “Palau d’Esport de Badalona”
- Multi-sport Pavilion and classroom complex
- Civic center “Cristalleries Planell”
- Crematorium of Hofheide

We will see if the matrix ideas establish basic accessible concepts and if it can be used as a reference to analyse other projects.

### Introduction

Throughout these academic years I have had the opportunity to get closer to architecture from several approaches; the technical and conceptual one; how and why everything is done.

What goes immediately next, in the interpretation and methodology analysis that is formulated in this project, it does not pretend to be a general proposal but completely the contrary; a particular plan.

What I am going to explain from now on is the way in which I have been built to face the comprehension of some buildings, not all of them, that intuitively I have been able to value as important. When that happens, when my interest goes to an architecture that attracts my attention, from which I think I will be able to learn or I will be able to enjoy with, I suggest a system to try to evaluate it, make it mine and also adapt it on how I understand the profession.

My system is, possibly, like so many things in life, like our cities, built by means of my own existence remnants. I would be so glad if it could be useful for someone, and in fact sometimes I explain it whoever; however, both its fundamentals and its application are totally personals.

What I expose, in the end, is an intimate logic extracted from my direct experience as an architecture student.

I understood along these learning years that, thanks to the technical and conceptual aspect, architect has the possibility to give answers to the people basic needs as for protection and shelter as well as caring for other human being worries.

That is why architecture defines not only the appearance of a certain place, but also forms its identity and reaffirms people cultural movements. The background of an architectural project comes directly influenced and conditioned by vicissitudes of the place, users and the available technology (reality).

The main objective is to analyse architecture, immerse myself into this reality and search for relations among different projects so as to find, in a certain way, a systematization to get closer to already made architecture projects

Throughout the last 9 years I have accumulated several and different knowledge but, at the same time, everything related thanks to the fact that they share a common end: making and knowing architecture better.

I have understood that I will not only use this knowledge so as to plan and build, but it has also given me an specific way to comprehend the place where we live, where we work or simply where we keep relationships and, one of the most important things, a concrete way to observe. Observation is a really important tool that we have.

*« If you cannot look, you do not know how to project »*

*(Josep M. Rovira, professor in the ETSAB theory department. UPC)*

This specific vision has been built as time goes by and by learning an endless number of topics and new concepts. College years have given me a bag full of knowledge and now, taking advantage of them, I pretend to organise them, join them together and build with them a document which helps me to understand different interesting projects.

Once these concepts separated, I will make a matrix that helps me to go in depth in the basic project concepts to classify and compare them. This matrix pretends to be the narrative construction regarding the project process. The matrix, as time passes, will become a tool for “me as an architect”

### Starting point.

The project organization, as if it were a narrative, will have 3 general parts in which all the project points will be developed. These three points will be the ones which order both the project and the matrix.

The chosen projects, 3 national projects and an international one will be the ones analysed and, at the same time, they will be useful to valid the elements that form the matrix.

the analysis that will be carried out will be useful to be able to isolate project ideas and compare them. Before going into this process, we are going to have a look at the architecture concept and we are going to see different profession meaning collected from several books which have analysed architect job and its functions.

### Architecture.

It is understood as the science that should go together with other knowledges. This science is acquired by means of practice and theory.

#### Practice:

It is a continue and repeated application of the use and realisation of handmade suggested projects, related to what it is want to be formed.

#### Theory

It can explain and demonstrate, according to reasoning and proportions laws, the architectural works perfection.

Those who, in a certain moment, overlook some of these two concepts, forget about important points which provide the projects with cohesion and meaning. That is why that architecture is always an addition of ideas, concepts and logics construction laws.

*«Those who, sheltered by theoretical concepts and well connoisseurs of constructive logics, as soldiers stocked by all the needed weapons, they reach their objectives ready and with greater applauses. »*

*(Vitruvio, Ten architecture's books)*

Indeed, in all the professions and above all in those with artistic ends, these two concepts can be distinguished: what for and what is.

- What for: it refers to what it is going to be developed and its purpose.
- What: It is the result made by means of demonstrable logics and principles.

From both concepts we can guess that professional must know them and put them into practise so as to develop himself/herself as an architect.

Thanks to the architecture manual from Vitruvio, we know the qualities that were expected to have an architect since immemorial times.

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*«So as to be architect it is important to have talent and passion for studying: due to the fact that nor talent without studies, nor studies without talent, can create a good architect.*

*He should be trained in Grammar: having aptitudes for drawing; knowing geometry; being an eagle-eyed person; being trained in arithmetic and versed in history; having profitably heard the philosophers, having music knowledge; not to ignore medicine and join together knowledge about jurisprudence and astrology»*

*(Vitruvio, Ten architecture's books)*

From the statement above we conclude that architecture is a profession on which converge several knowledges and, as if it were a thread, the architect must know how to weave them so as to obtain a result not only beautiful but also functional, economical and according to all the needs that are required.

*Speaking in current terms...*

All the defined and studied contributions provided by Vitruvio, as time has gone by, hasn't been out of step. To my mind, some of these theories have been redefining with the passage of time and others remains intact nowadays as valued and needed concepts to project.

Regardless of previously presented, it is interested to know some of the most current ideas that turn into shape and give definition not only to architecture but also to the act by means of which we define the architect task.

Analysing and understanding, in a more current way, the concepts that nowadays experts have defined and investigated will help us to comprehend more precisely architect profession and the way in which they turn their ideas into shape, something vital for the approach that, later on, will be used to define the analysis matrix.

Kenneth Frampton, architect and English writer combines his professional activity between the architecture development and a criticism of it.

In his famous book, "Modern architecture: A critical history" (1<sup>st</sup> Edition 1981, Gustavo Gil). He defines architecture as habitable art, an art like all the arts, very bound to every moment aesthetics expectations, but having to answer the human being practice needs.

From his work "Studies in Tectonic Culture" (1<sup>st</sup> Edition 1999 AKAL) we find the interest in what he suggests about the modern architecture where he affirms that it has more relation with the structure and construction than with space and abstract shape.

Andrea Deplazes, Architect by ETH in Zurich, head of the projects department in this college and co-owner of the architectural firm Bearth + Deplazes and author of "Constructing architecture" (3<sup>rd</sup> Edition 2010, Gustavo Gili).

Ideas related to "how to make architecture" are treated in this work from several points of views, which are specially interesting for this investigation.

From the different points of views collected from Deplazes work, it is important to emphasize the view that he provides referring to nowadays architect job, which to the mind of Deplazes, has the architectonic attitude that gives the capability to be able to join the project and the work execution.

*«A thematic and content coherence that, in the project process, goes alternatively among clarification, the pursued objective and a progressive transformation that is reflected on the constructed work»*

*(Andrea Deplazes, Constructing architecture)*

From the already said affirmation we can get the idea of living project, which evolves with the passage of time and is directly influenced by several aspects that converge when conceptual and material realization of an architectural work and how these processes complement and condition each other throughout the process.

Thanks to the interview carried out to the architect Esteve Bonell, founding partner of Bonell & Gil studio, and different speeches I had the opportunity to attend, I could collect some field information and verify that ideas such as time, living project and other concepts that we are going to treat in this research project are really important in current society architectural studies.

From the Interview to Esteve Bonell, we can extract different concepts and tactics used in his projects which, so as to simplify, they could be summarised in what the architect defines as real world referring to the place, time, people, landscape among others and the idea world where all the theoretical logics and guidelines are defined for the assignment realisation.

*«At the end, everything must fit with precision, as if it were a swiss clock»*

*(Esteve Bonell. Architect)*

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From the architect Martín la Peña speech whose title is “Modos de oficio”, it is important to highlight the example comparing the ideas with a culinary process. He said an architect should let the ideas settle as if they were a stew.

Precisely, time is what lets the idea settle allowing the architect to see the light and find the best answer to a problem.

*«Matter of time, then, is one of the architect secrets»*

*(José Antoni Martínez Lapeña. Architect)*

Getting back to Andrea Deplazes ideas, we now see a comparison by means of which we will be able to understand better the logic and coherent architecture composition.

When a literary work is translated to another language, the correct grammar uses or syntax is an indispensable technical requirement. It is about to interpret, with coherence, the original text sense and atmosphere.

Something similar happens when speaking about architecture:

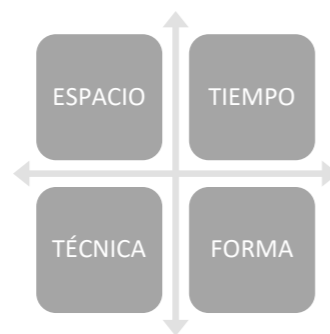
«Architecture is made up of phonemes, words and texts; architecture is configured by materials (element), constructive grammar (groups) and a structural syntax (construction)»

«Furthermore, we could title it as architecture's mechanics; although the resources collected from the previous example are conclusive, until they are conceptually linked to a project, they remain broken up, disconnected and, therefore, meaningless. »

*(Andrea Deplazes, constructing architecture)*

We can affirm, then, that only in relation to a concept or an idea, a project process is developed. Thanks to the already said process, the pieces originally isolated from the technique and the construction become ordered in a unique architectural volume.

Constructive elements and the result complete, condition and influence each other. It is the step from the constructive work to architecture, from construction to tectonics.



## Creative process

On the basis of the ideas previously mentioned, related to the architect abilities and understanding them as the tools that he use to solve problems and give solutions; we could conclude that the idea to project and build forms a unit (an unique piece), and only when both complement each other it is when the architectural work really makes sense.

From this approach we can continue the research analysing this double aspect. On the one hand, the conceptual/compositive one and, on the other hand, turning ideas into material. Thanks to this mix we have as result this project.

Having said that, we can guess that projecting and building are two fields that, in spite of being different, goes hand by hand and pretend to reach a specific and unique purpose. That is why shape is not only the construction and matter result, but also the correct conceptual architect reasonings appliance and correct tactics. Everything previously mentioned generates a result with material and reasonable sense.

If we only were based on the material conception of the project, would mean to limit ourselves to a mechanistic deduction because the configuration of shape implies information by itself.

Even the absence of a formal purpose gives information. For instance, functional construction for which architecture would be the result of a concrete need.

The idea to project and build finds an explanation adapted to reality in the metaphor of a potter who works in his potter's wheel and, it is precisely with this example that we will understand that the fact of projecting should be formed by the two aspects previously mentioned.

*«The craftsman models with both hands a pot, applying above the shapeless mas of mud the effort of a hand from the outside and the effort of another hand from the inside the hollow of the container it shapes. It rises up, then, a space container.»*

*In the best-case scenario, both efforts act, in some way, complementarily or, at least, they condition each other so that didactics turns into work method and, from then on, in the project process. It is nourished on both senses. »*

*(Andrea Deplazes, constructing architecture)*

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- From outside: about the classic way that leads the urban project to the architectural one.
- From inside the project, about the spatial and constructive conception, the tectonics one. Both lead from something abstract to something concrete.

Architectonical matter is situated between both: as a limit and transition from inside and the outside, combining all the qualities referred to the design, culture and atmosphere that irradiate over the space.

That is the architecture paradox: although the space is its first and most important goal, it also includes non-space, the matter that delimits the space and defines both from the outside to the inside, and the contrary.

About the limit issue:

*«Limit is not the place where the space begins, but how Greek people recognised the place from which their own existence starts to make sense.*

*From this point of view, architects are metaphysicians that could not exist without physicians (technician, engineers, builder) because only by means of the conjunction of the already said professions is when shape is turned into shape.*

*It is only possible to think on conceiving spaces or space complexes and project them, or rebuild them, if the conditions of its concretions and/or realization are well known and totally dominated. »*

*(Martin Heidegger. German philosopher)*

Architect is, therefore, a professional dilettante, a kind of alchemist worried about the production of a complex totality, a synthesis carried out by means of specific valuation of the several previous determinants of certain requirements.

The architectural space character depends on how things are done and it is determined by its technical realization and structural properties of the construction materials used.

*Factors that influence in architectural shape*

Material has a shape, independent on the intention to make it recognizable. In front of a construction, one wonders how it has turned into that shape.

This question can be made in two different ways:

- Which external factors influence in a shape development?

So as to give an answer to this question it is necessary to contemplate a huge variety of factors such as geographical, cultural and historically minded.

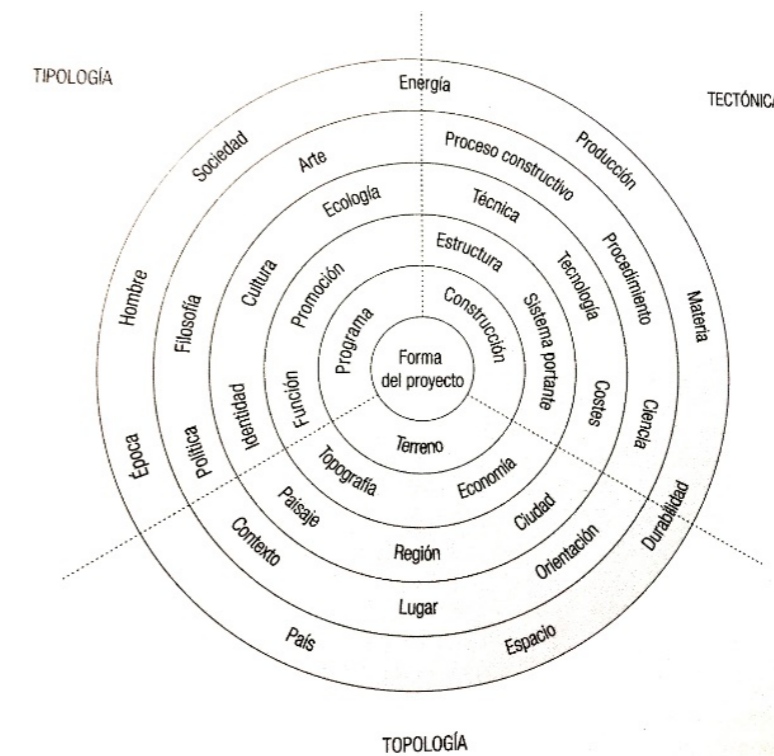
- Which are the criteria that determine the shape?

To answer this question, we have to focus on a choice based on formal criteria.

Therefore, shape is the result of a complex combination set. These factors combination guarantees a solution, to some extent, previously determined. This does not mean get to a forced result, because there are always different possible choices.

Kenneth Frampton determines three principal and fundamental influencing factors; He says that the interaction of three convergent aspects leads to everything constructed:

- Topology
- Typology
- Tectonics



According to that affirmation, we are in front of a general matrix in which we can appreciate a huge number of external and internal determinants; all of them real or imaginary that converge and form a concrete project. They define a shape and so an external and internal scenario.

## Matrix scheme

If we go back to the suggested issues at the beginning of this document and we relate them with the matrix idea, we find all those interactions in front of which the architect suggests, acts and defines.

The purpose of this research project is not only making a theoretical framework about architect profession, but also making an own matrix so we are going to be based on all the concepts and relations that have been explained up to now.

Matrix is made up of simple and graphic interpretation concepts whose aim is not taking on all the aspects that include the project process, but getting closer to separate and differentiate the main project ideas so as to understand it and comprehend it from a personal point of view.

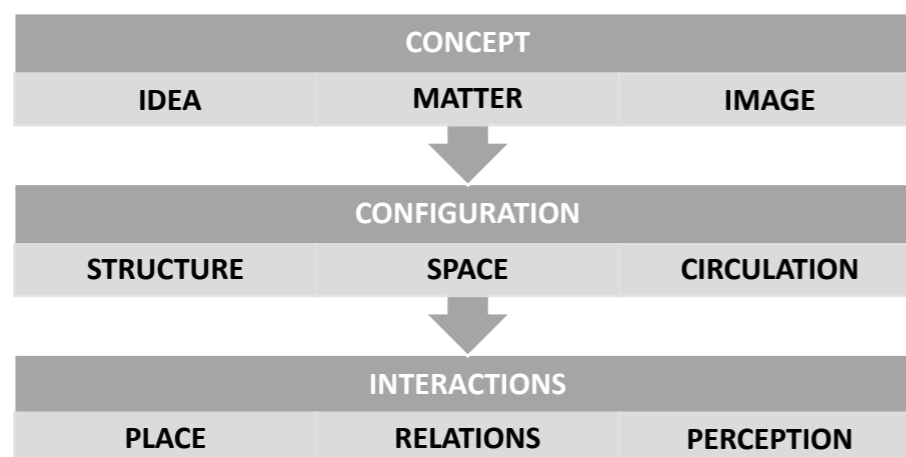
In addition to that, its aim is also to find differentiating points which supply the project with style, personality or simply precision when shaping the idea.

The matrix organisation suggested pretends to establish, just like the previously mentioned example, three big blocks from which we will be able to synthetically separate the project process carried out in specific cases.

Once a logic and coherent matrix scheme has been exposed and the ideas that form it have been defined, we will put it into practice by means of the analysis of four projects that we will mention later on.

### ***Matrix levels***

Next, we show the matrix scheme, together with descriptions and explanations that will help to comprehend its development.



## Development

### ***General aspects of the parts***

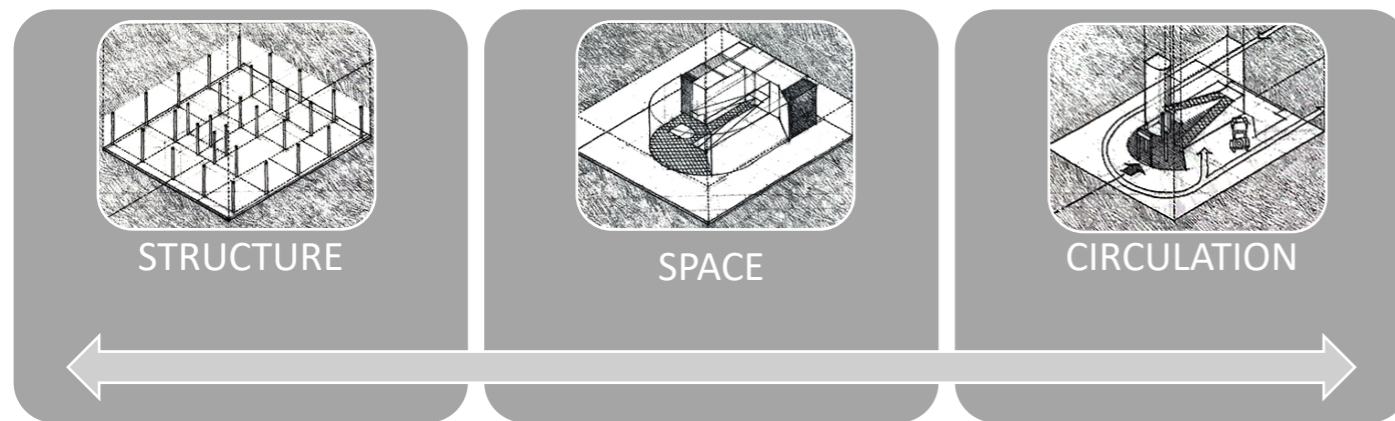




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*CONCEPT: Within the first matrix level we find the world of ideas, the first closeness to the project, the concept as first intention to pursue, material that defines what it will be and image as the end that is want to be reached*

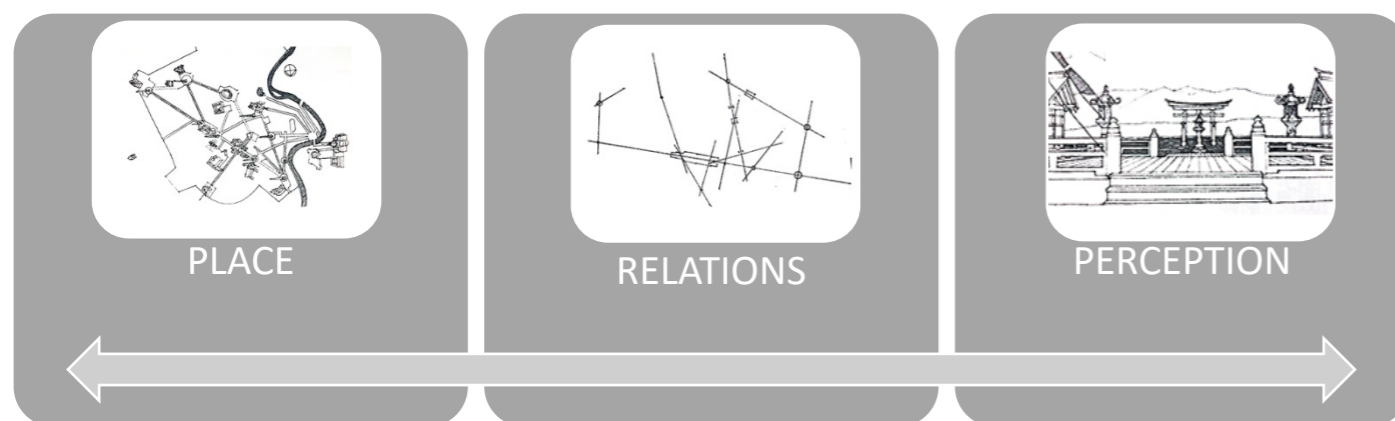
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*CONFIGURATION: Within this second level, we find the idea turned into something material, adapted to a logic of constructive order, following the rules that are marked by technology and taking advantage of them to configurate the space and, at the same time, define how the user moves within the limits of what is built.*

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*INTERACTIONS: The third level is formed by determinants such as "where" and the different relations that can be established at a specific and general level within the project and how, with these relations, a specific sensorial experience is tried to be found, for instance, thanks to light.*

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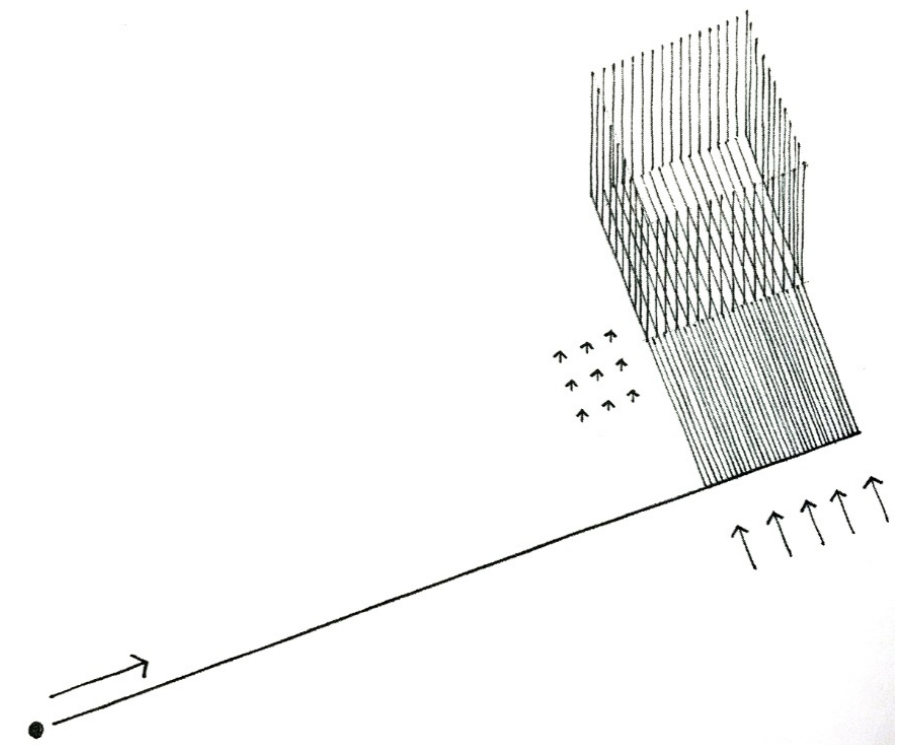
### Concept

Every pictorial shape begins with a point that starts to move.

The point moves and gives rise to the line (1<sup>st</sup> dimension) If we add a new point to the equation then we have a plan and, thanks to this conjunction we will be able to speak about two-dimensionality, whose next level is volume, three-dimensionality and so on.

A combination of kinetic energies which turn the point into line, line into plan and plan into a spatial dimension.

Paul Klee 1956



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Within the first matrix level we find 3 sections whose objective is helping to comprehend the projects starting points.

Guessing that behind any project process can be found a basic idea in front of which the project starts growing and adopting an imagined shape.

Now we see 3 sublevels that configurate the first matrix level:

### Idea

The concept meaning refers to mental representation that rises up from some logic reasoning or simply people imagination.

It is considered to be the most basic understanding act, when contemplating the mere action of knowing something.

For this first concept, we are going to be focused on finding basic geometric rules of projects; understanding them within the resulting final form.

That is, we will try to reduce the project to its basic form and how they configurate spatial specific complexes.

As for art and design, shape denotes the formal work structure, the way in which all the elements and parts of a construction are coordinated to produce a coherent image.

According to the aim of this analysis, shape refers to internal structure, external outline and to the principle that gives unity to the building.

Shape is the primary characteristic to identify a volume. It is formed by outlines and plan interrelations that define its own limits.

On the basis of the essential shapes localisation we will be able to establish a first contact with the project and define its main limits.

These first ideas can appear in the three dimensions, either defining symmetry axis, two-dimensional shapes or the step to volumetry where the third dimension makes sense of project limits.

So as to simplify, we show some examples below:

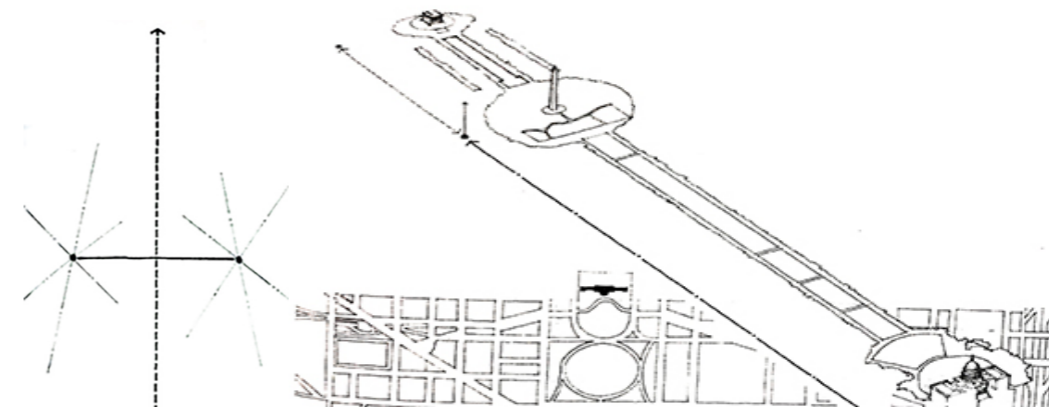


Figure 1 The Mall, Washintong. Francis D. K Ching

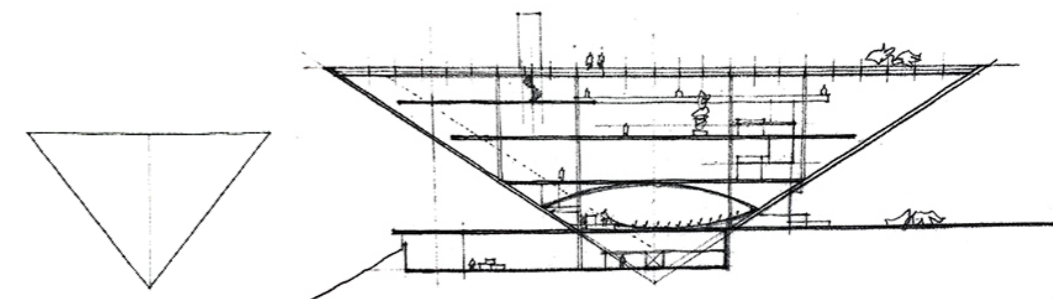


Figure 2 Modern museum. Oscar Niemeyer.

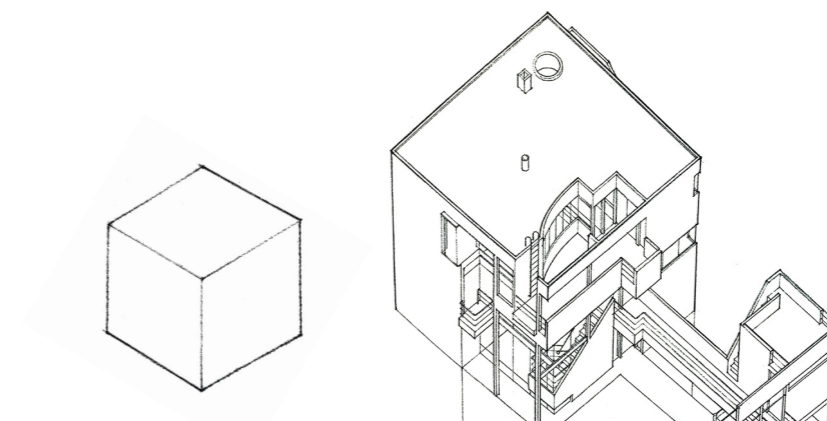


Figure 3 Hanselman house. Michael Graves

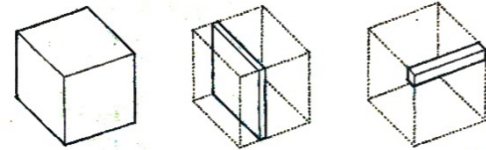
## Matter

Matter as a concept refers to the way how final form is defined, strategies used by the architect to shape the form.

Within these located basic forms, we will see now which strategies and principles are often used to configurate spaces and, in the end, our project limits.

Any shape is susceptible to be perceived as a pure solid transformation. These transformations are result of dimensional modifications, addition or elimination of elements or parts of it.

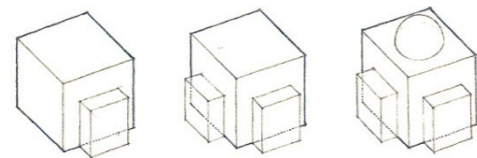
- **Dimensional transformation:** A shape can be transformed by means of the modification of its dimensions, but it does not lose its identity as a geometric family member. For instance, a cube is transformed into another prismatic form if we variate its height, width or length; it can be compressed until having a flat shape or simply lengthen to another form.



- **Subtractive transformation:** Removing a part of the volume in a specific way implies its transformation. Depending on this elimination, it can cause that the form preserves its original identity or, on the contrary, loses it and turns to another geometric family. A cube will preserve its identity despite removing a part of its volume, but if we continue removing parts of it, it will turn into other shapes such as polyhedron and so on.



- **Additive transformations:** A shape can also change by adding elements to its initial volume. Depending on the constitution of the element added, it will entail the modification or preservation of the original form identity.



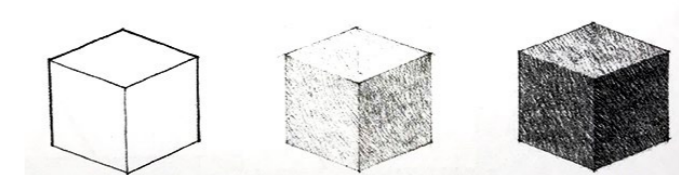
## Image

«Architecture is the wisdom game, correct and magnifque of the volumes reunited under light. Our eyes are made to see shapes in lights, and lights and shadows reveal shapes»

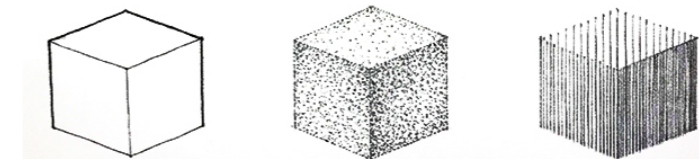
*(Le Corbusier. Architect)*

When we refer to image, we are referring to the result that is pretended to reach, instead of understanding how we are going to manage to reach this result, taking into account the characteristics that matter will have. We are going to focus on:

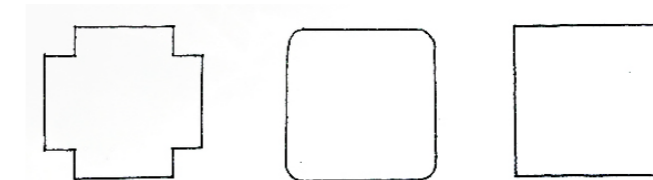
- **Use of colour** provided by the material used: It is interesting to see how material that will determine shapes is not only useful to define a lot of forms, but also it is often the one which defines the shape aspect.



- **Texture:** superficial characteristic of a shape. Texture affects both tactile qualities and light reflection on surfaces and it comes directly conditioned by the type of material that is used to configurate the spaces limits.



- **Porosity and matter permeability:** we will analyse how the building is more or less permeable dependent on the continuity of its limits.



### Configuration

We collect thirty radius and we call it wheel. However, its utility only depends on the space. We use clay to make a pot, but its utility only depends on the space. We open doors and windows to build houses and uniquely in these spaces is utility located. Therefore, while we take advantage of what it is, it is important we recognise the utility of what it is not.

Lao Tzu, Tao te ching VIth century B.C



After having detailed the aspects of the first matrix level, it is possible to continue defining the following points to take into account when getting closer to a new project and, in this way, being able to separate those qualities that define it.

Next level will consist on observing logic project organisation, associating it to structure, space and circulation idea.

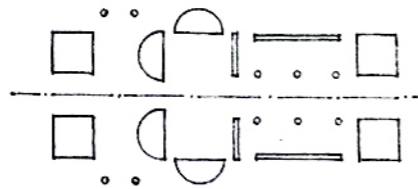
### Structure

Within this part it is not pretended to go in depth into structural typologies, but be focused on the guidelines marked by these systems.

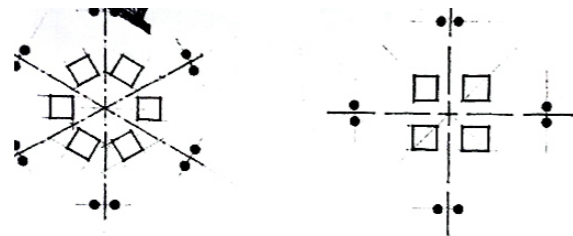
By means of the observation it is analysed if, within the project, there is some relation between structural system and spatial organisation and, at the same time, it is observed if these systems mark guidelines in the project idea.

This step is going to be made in a simply way analysing if structure marks some of the following guidelines:

- **Symmetric order:** We say that there is symmetry within an architectural ensemble when it is structured around an axis or centre. Inside this ide we can identify two typologies:
  - Bilateral symmetry the one referred to the balanced arrangement of similar elements or not, arranged on opposite sides of an axis.



- Central symmetry referred in that case to the balanced arrangement of organized elements around a centre.



- **Asymmetric order:** Understood as the architectural ensemble disorder or other types of organizations around the structure which is out of this analysis.

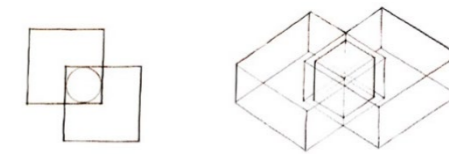
### Space.

As a general rule, buildings are often configured by several spaces and these spaces, at the same time, are often related to each other following the general idea of primary and secondary spaces.

We understand primary spaces as those where the main activity is developed and secondary spaces as those that are complemented by primary spaces. Even there are exceptions, we are going to focus on general cases.

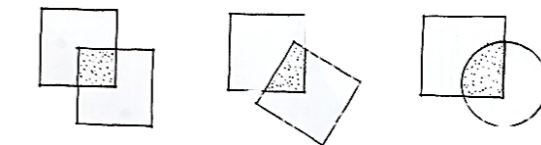
Continuing, then, with this general idea, it is possible to make the following distinction between the type of connection established between spaces.

- **Direct:** this connection is originated when limits of a space directly contact with another one. That is, both spatial limits overlap generating an interrelation by means of a shared spatial zone.

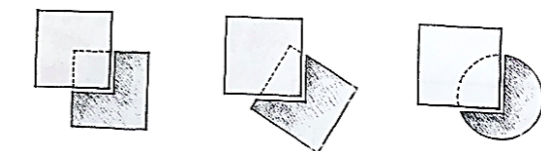


Within direct connection 3 levels can be identified

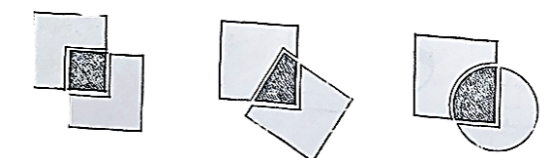
- Contact space is also shared by main spaces:



- The link space becomes part of one of the two main spaces.

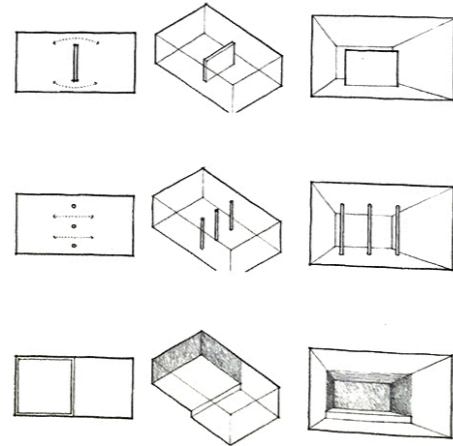


- The shared space takes an own identity and separates from related spaces.



- **Indirect:** This connection is maybe the most common inside buildings because it attends to continuity between zones and allows a clear identification of zones. The intensity connection is determined by the characteristics of elements that join and separate spaces.

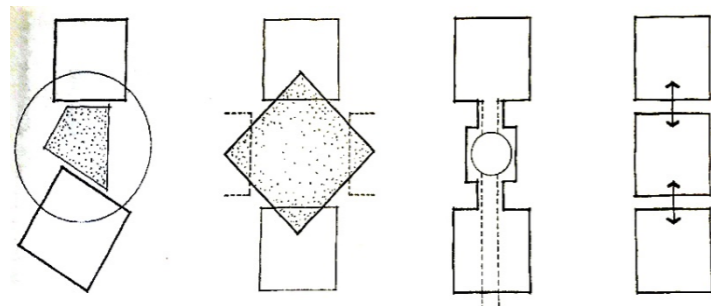
It exists several elements that act as connecting and dividing elements at the same time. They are: Plans, columns and levels.



- **Intermediate:** Spaces can connect each other by means of a third one, which is a mediator between our main spaces.

Intermediate space can be different from the other two as for shape and orientation. In this way, it emphasises and express its link function.

According to this affirmation we can identify different models for this communicating element that can have different dimensions and forms in comparison with the zones that should be communicated.



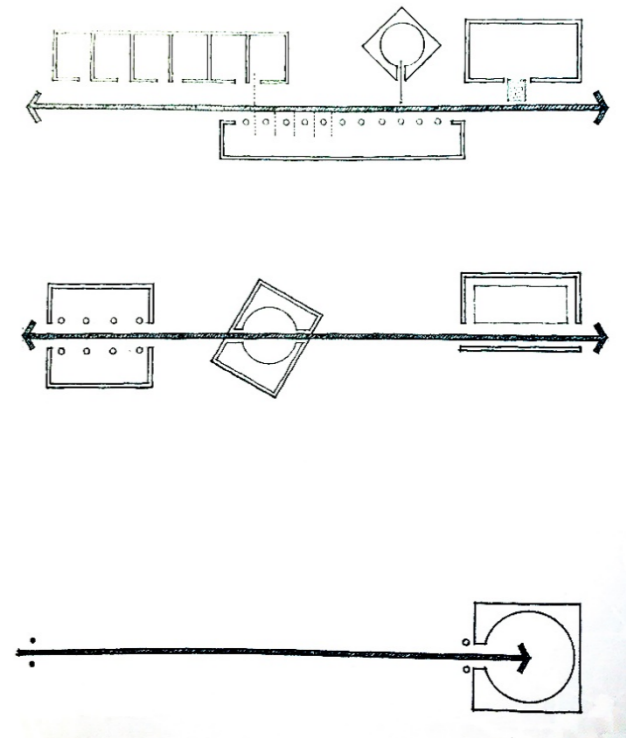
### Circulation

Generally, when we speak about circulation, we associate it to a tour along a place with specific means and conditions. These walks often have a starting and ending point.

Relating it to architecture, tours along the inside or exterior of buildings are often formed by different movements influenced by space configurations that determine the project. That is, tours drive us throughout different spatial sequences until getting to a specific destination and experimenting architecture in a particular way.

That is why we are going to focus on the importance of relations generated between walks and spaces and we will differentiate among the following 3 possibilities:

- **Going between spaces:** In this relation typology spaces integrity is preserved. The walk configuration is flexible.
- **Going through spaces:** In this case, the walk goes directly through the space's limits. Intersection, by itself, creates walks or residual movements along the interior of the crossed limits or generates complementary circulations.
- **Getting to a space:** the specific space situation that is want to be reached determines the walk, and the final space can generate uncertainty because we do not perceive it until we end the walk.



Interactions:

The interaction of our bodies world and our residence places is always a flow. We build places that are the expression of our haptic experiences, even they are born from places previously created. Our bodies and movements, being or not aware of this process, keep an interrupted dialogue with our buildings. We believe that the three-dimensionality perception more essential and memorable is origin of body experiences and that perception is a basis from which spatial feeling, that causes in us the experience of buildings, is known

Charles moore y Robert yudell, body, memory and architecture





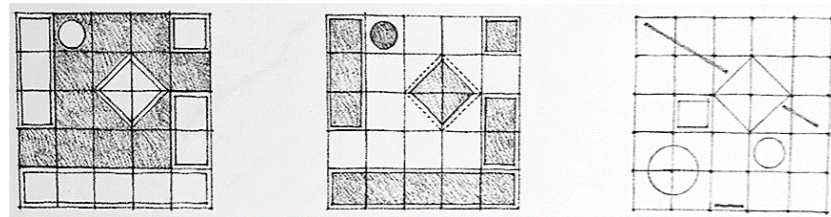
We are going to define now the last three concepts that define the third matrix level. Within this part we are going to focus on comprehend the project in relation to its establishment in a specific place.

At this level we are going to analyse the interaction that takes place between project and surroundings, focusing firstly on inputs provided by a specific location and, on the other hand how the project responds to them by means of specific relations.

Last but not least, at a perception level, we focus on observing how architect work with light inside the building.

### Place.

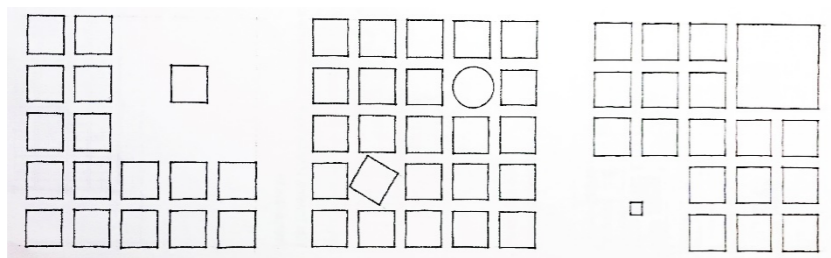
Location and its characteristics will be the objective of this section. Those points that often condition the project will be analysed. Urban fabric where the building will be located and all those characteristics that can influence direct or indirectly the project, will also be observed.



### Relations

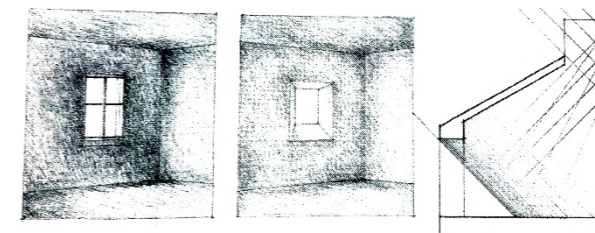
Once we have got closer to the project location, the second analysis level consists on finding the possible articulation between surroundings and proposal, observing how some shape and outline parameters interact either by likeness or difference with the nearby buildings.

We are going to highlight size, shape and situations concepts to simplify the analysis based on the fact that with these three resources we will be able to identify some interesting points in the project decisions.



### Perception.

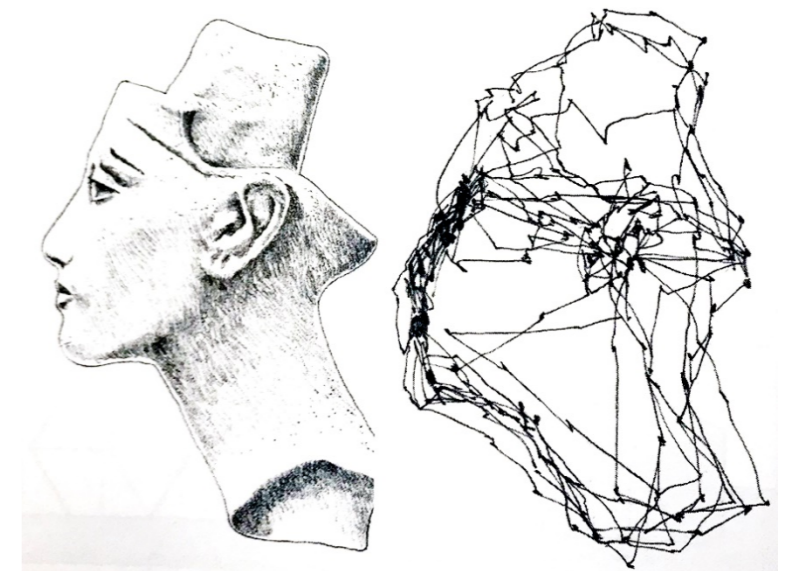
The last matrix concept and, maybe, the most subjective, refers to how architecture is perceived. We will focus not on personal experience as for projects, but on locating those significant points from which architect pretended to provoke a specific feeling, taking advantage of how light in the inside is perceived, its warmth and the strategy of how light reaches the inside of buildings.



This is maybe the most symbolic point because, how Francis D. K. Ching, author of "Architecture, shape, space and order" stated:

*«When space starts to be perceived, delimited, modelled and organized by materials, architecture begins to exist»*

ANNEX 01: ANALYSIS



## Sport equipment

“Palau d’Esports de Badalona”

*Contest: 1987 Project: 1989 Construction: 1990-1991*

*Architects: Esteve Bonell and J.Mª Gil*

During a speech about another sportive project (el Velódromo de Horta) Esteve Bonell states that his architecture tries to be classical regarding the way in which the building is established in the place and for its Mediterranean shape, image horizontality, light use and materials.

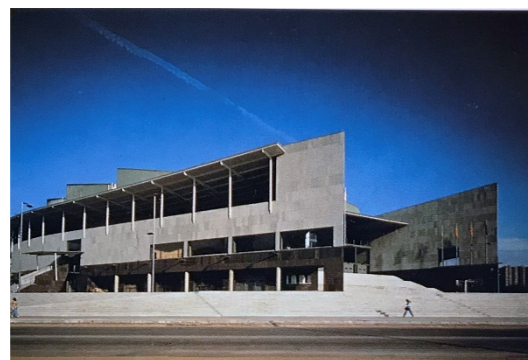
Lastly, his architecture also tries to be modern because of the use of materials according to a constructive logic. Thanks to the mix of these two concepts and his experience, a balanced architecture is generated.

Geometric figures that have always defined arenas and amphitheatres; the circle and the ellipse. Specifically speaking about el “Palau d’Esports” the ellipse regular shape is defined and it will integrate the different building components. This regularity breaks in a certain moment creating an ellipse breakup that will generate that the building opens to the city. The entrance is demarcated for a stairway that creates the main access.

The ellipse geometry corresponds to the way in which Roman people built their amphitheatres. It is a line with four centres whose connection forms two equilateral triangles.

This typology allows an order both visual and structural and gives to the building a strength that can determine and order the closest surroundings.

Authors define the building as the search of a homogeneous space in which spectators and players are part of the show. Each person becomes a space measurement unit.



## Sport equipment

Multi-sport pavilion UFV

*Project: 2012 Construction: 2016*

*Architect: Alberto Campo Baeza*

The building has a sport centre and a classroom complex, equipment to complement the campus of the Francisco de Vitoria University, Madrid.

The building has a restrained volumetry that responds to the general order of the campus as for maximum heights and alignments.

Volumes of both the multi-sport pavilion and the classroom complex search the direct relation with its closest surroundings by means of the material and shape use. Thanks to the shape simplicity and materials used, the building becomes important into the surroundings.

It can be appreciated a differentiation between the pavilion and the classroom complex; The materials used for the pavilion define a translucent box, where light floods the inside and a feeling of volume lightness is transmitted.

Thanks to the transparencies of this body a direct relation between the inside and the outside of the building is generated, blurring the limits through the material.

For the classroom complex and the communicating zone two more hard and heavy volumes made with concrete facades are defined. They will form a mix of volumes behind the pavilion as a background curtain, where the pavilion will be the protagonist again, that adapts its several facades according to the orientation allowing to obtain various lighting in the inside.

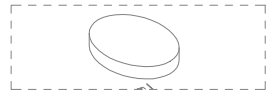
Functionally, multi-sport Pavilion zone is the central building axis, it will work as a huge bright room that will be useful for sportive issues or for celebrating different university events. A large diaphanous space defined by light and where the limits seem to blur.



"Palau Municipal d'Esports de Badalona"

CONCEPT

• Idea:



• Shape:

- Dimensional:
- Subtractive:
- Additives:

• Image:

- Use of colour:
- Texture:
- Porosity:

CONFIGURATION

• Structure:

- Symmetric order:
- Central symmetric order:
- Asymmetric order:

• Space:

- Direct relation:
- Indirect relation:
- Intermediate relation:

• Circulation:

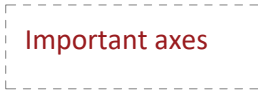
- Between spaces:
- Through spaces:
- Get to a space:

INTERACTIONS

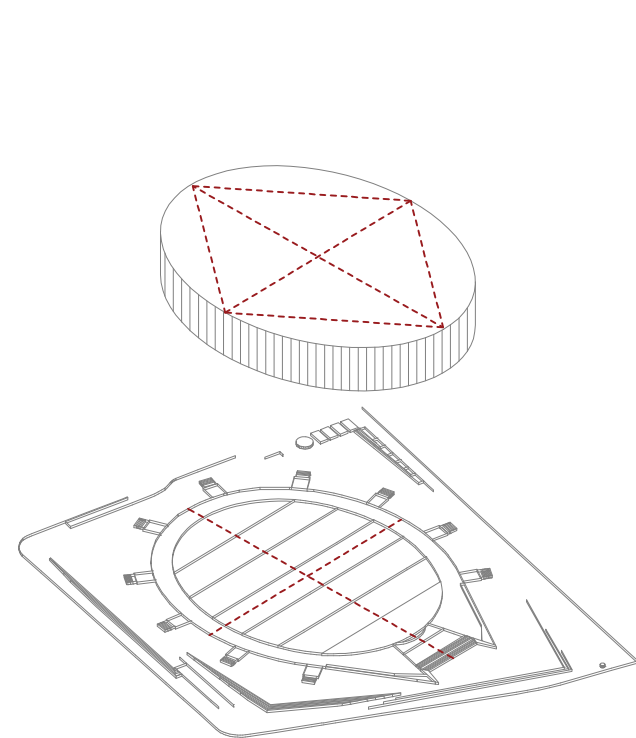
• Place:



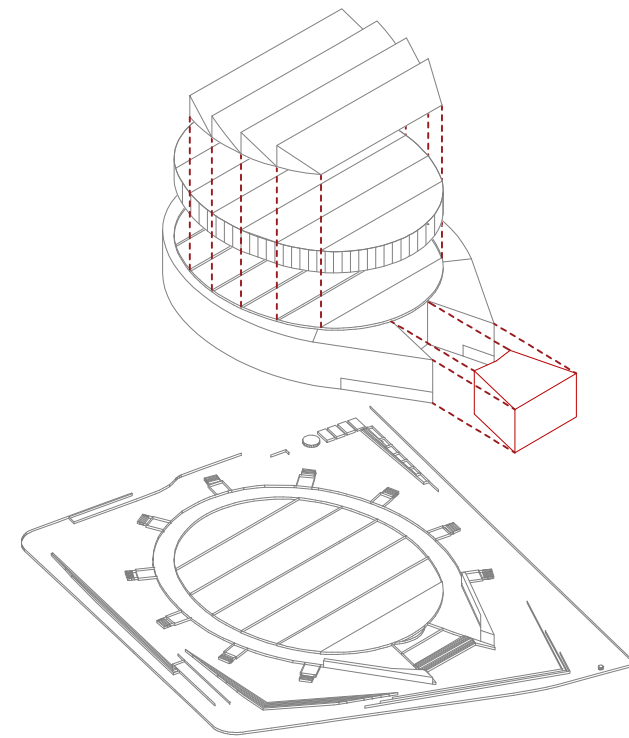
• Relations:



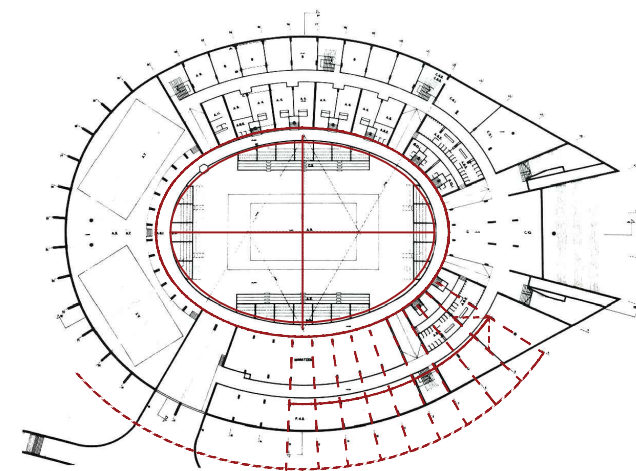
• Perception:



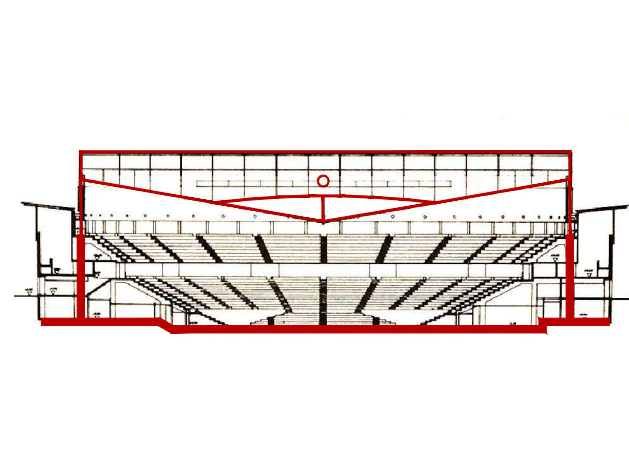
Basic idea: Ellipse



Subtractive transformation



General structure: central symmetric order

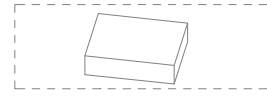


Covered structure: symmetric order with central axis

Multi-sport pavilion UFV

CONCEPT

• Idea:



• Shape:

- Dimensional:
- Subtractive:
- Additives:

• Image:

- Use of colour:
- Texture:
- Porosity:

CONFIGURATION

• Structure:

- Symmetric order:
- Central symmetric order:
- Asymmetric order:

• Space:

- Direct relation:
- Indirect relation:
- Intermediate relation:

• Circulation:

- Between spaces:
- Through spaces:
- Get to a space:

INTERACTIONS

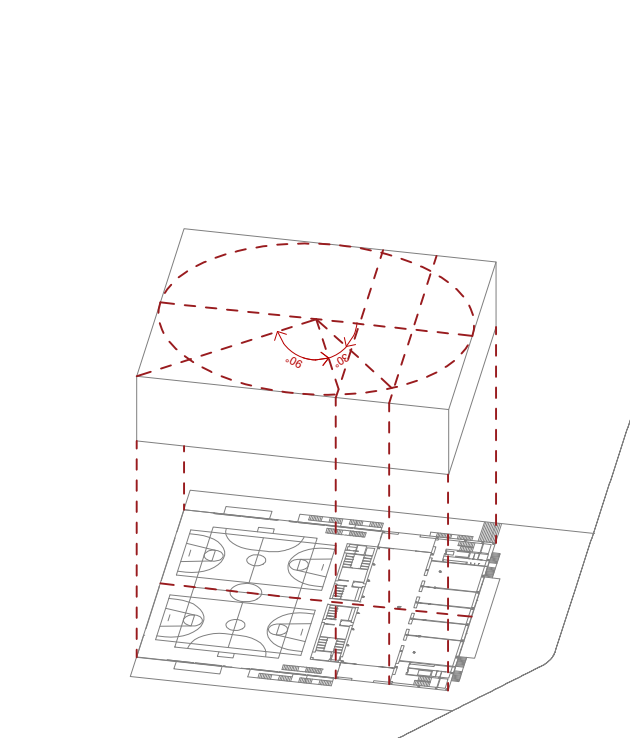
• Place:



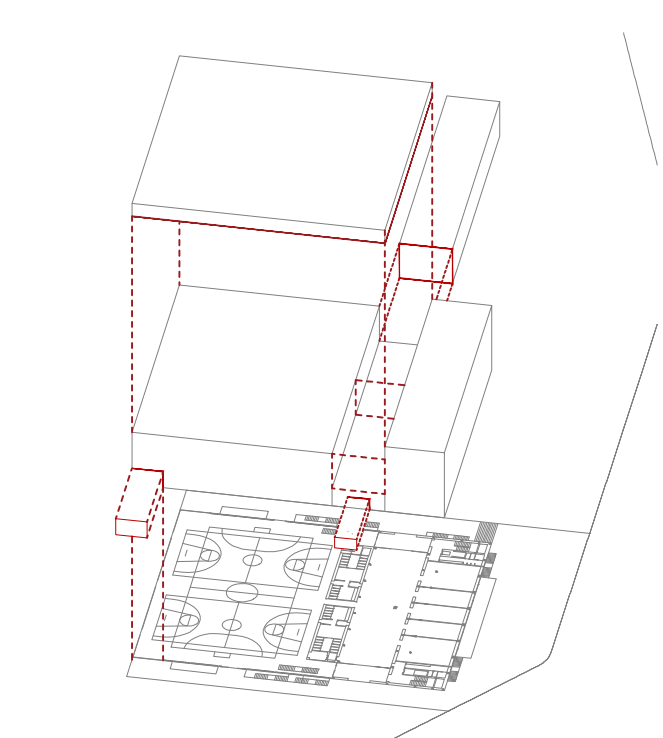
• Relations:



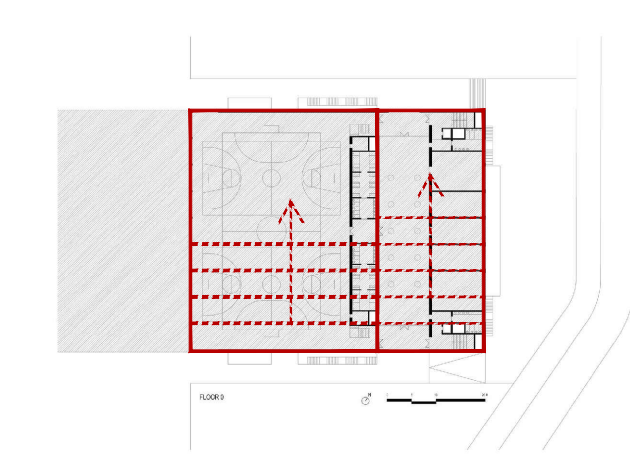
• Perception:



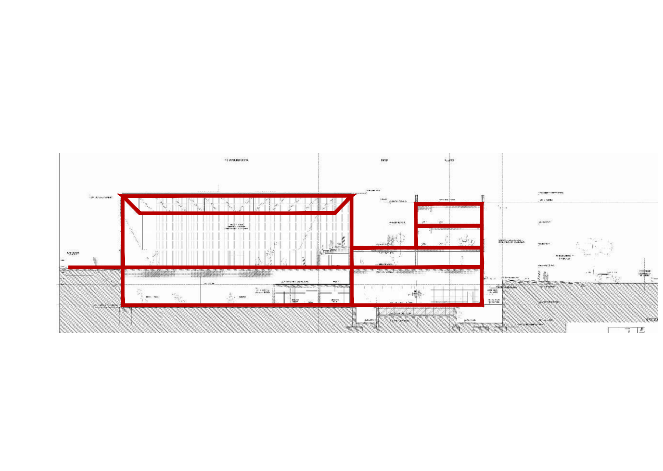
Basic idea: rectangle



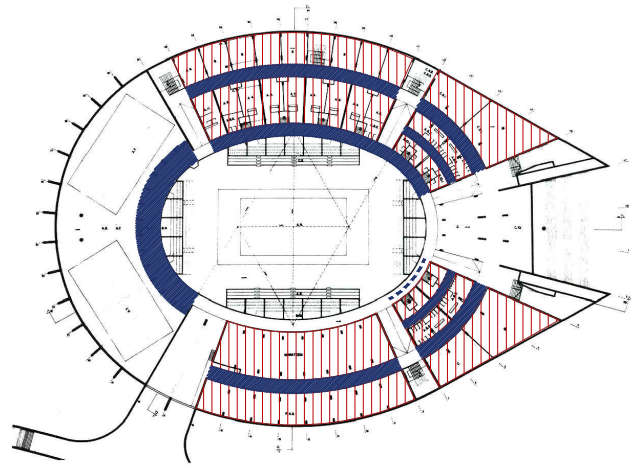
Subtractive transformation



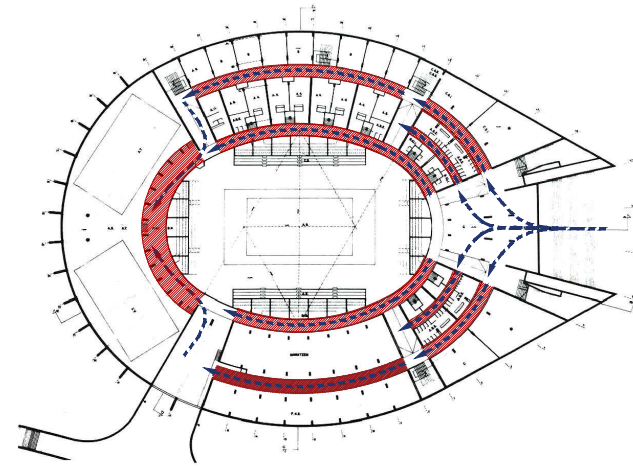
General structure: symmetric order



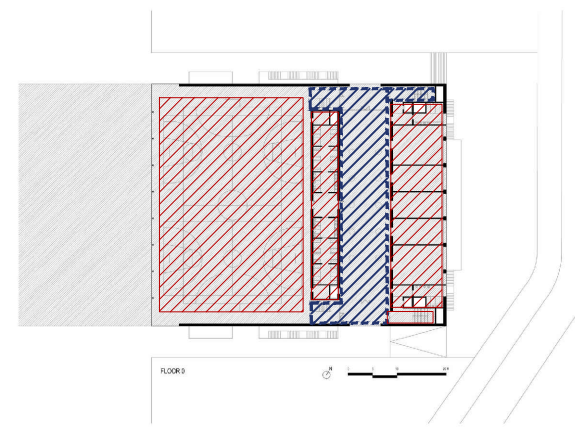
Covered structure: symmetric and asymmetric order



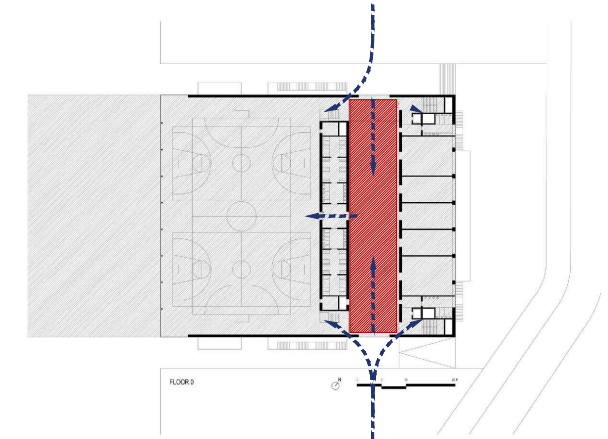
Spaces: red »primary spaces. Blue » secondary spaces. An intermediate relation is generated.



Circulation: between spaces



Spaces: red »primary spaces. Blue » secondary spaces. Direct relation. Space with own identity



Circulation: between spaces

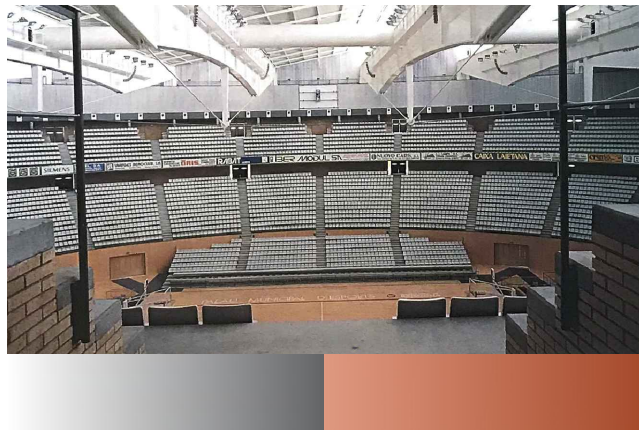


Image: use of colour

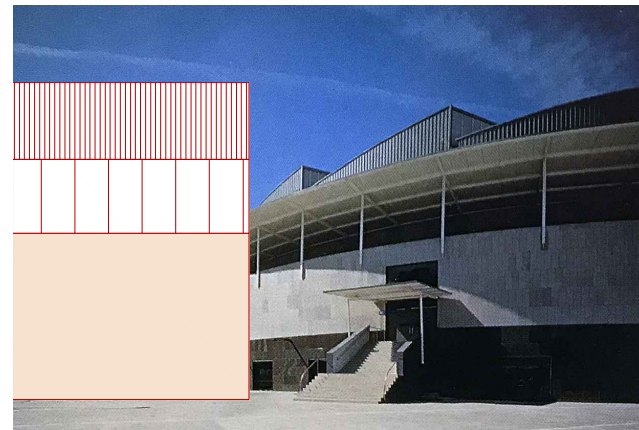


Image: texture



Image: use of colour

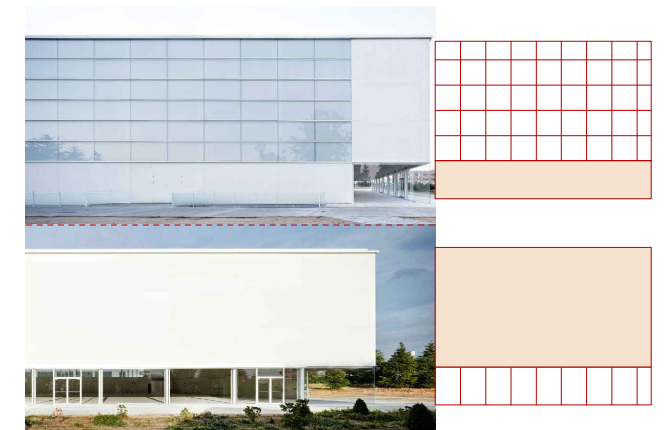


Image: texture

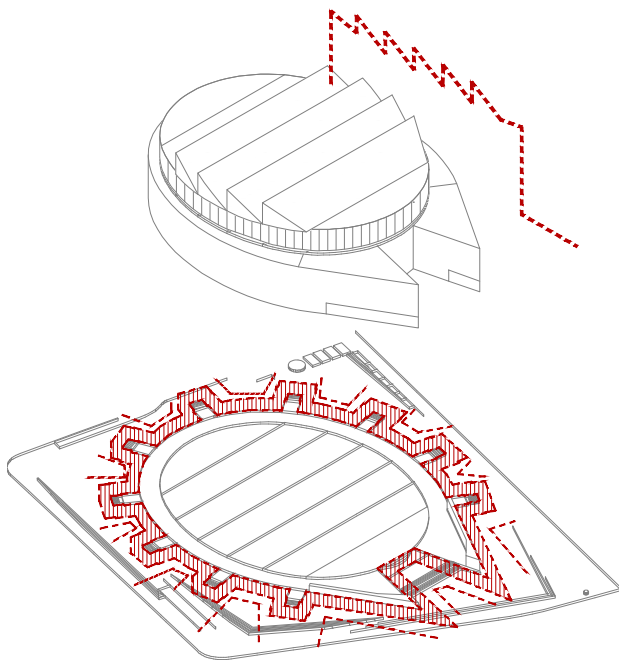


Image: porosity



Perception: Natural light incidence through the cover

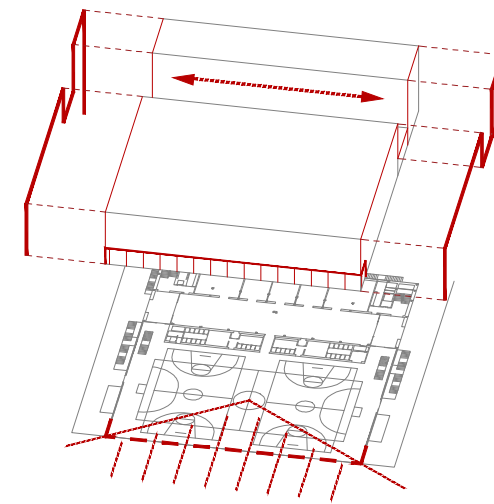
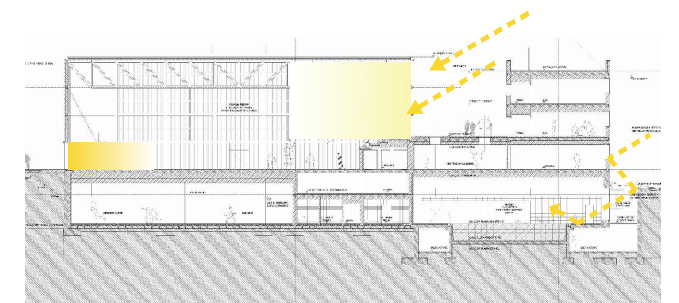
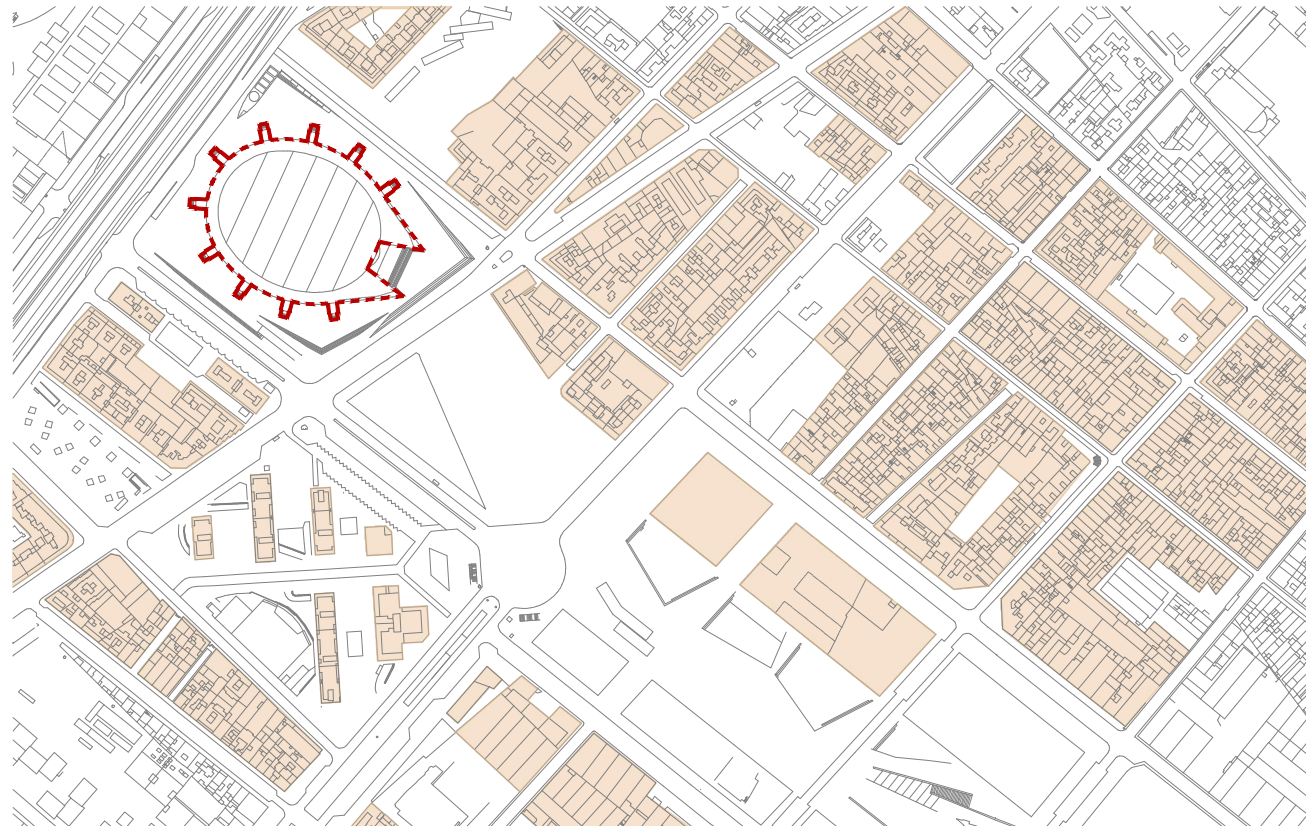


Image: porosity



Perception: Natural light incidence through facades and courtyard

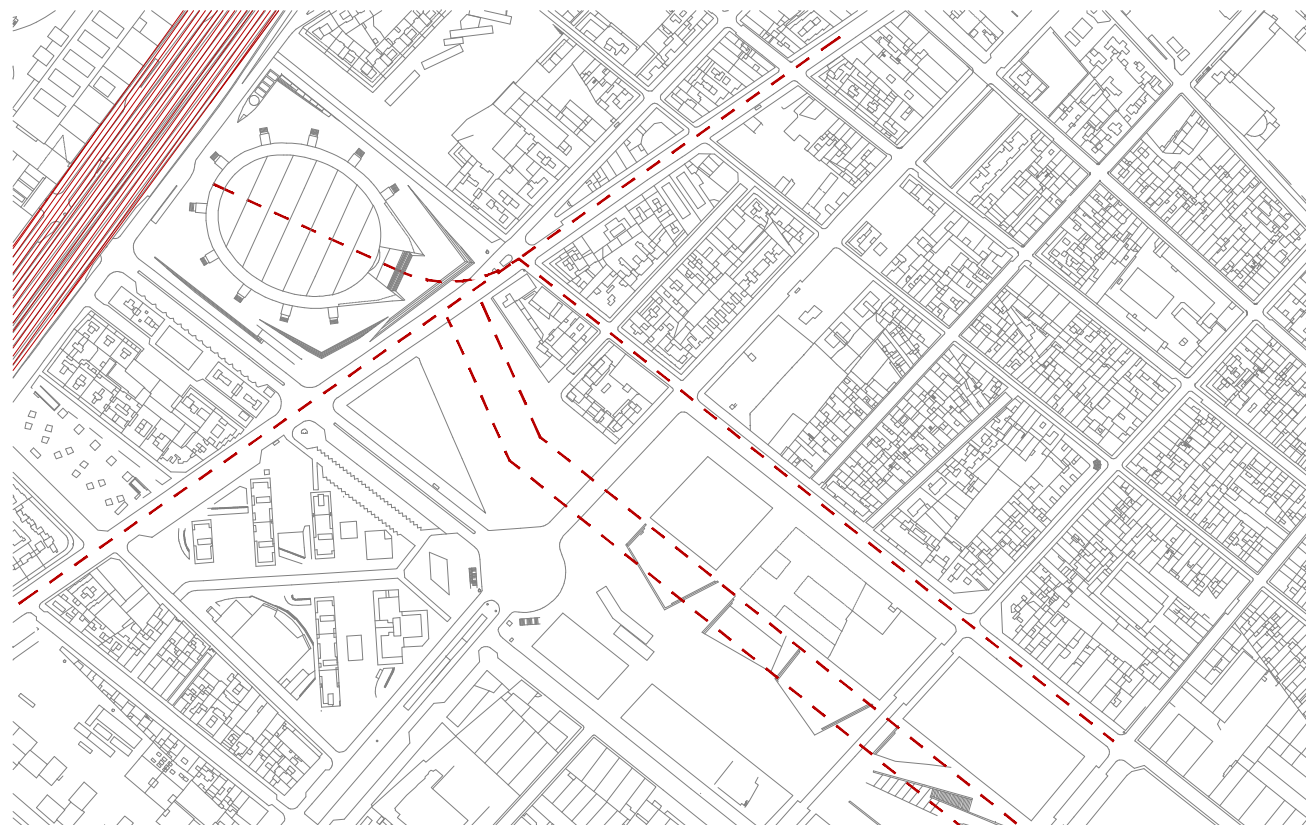




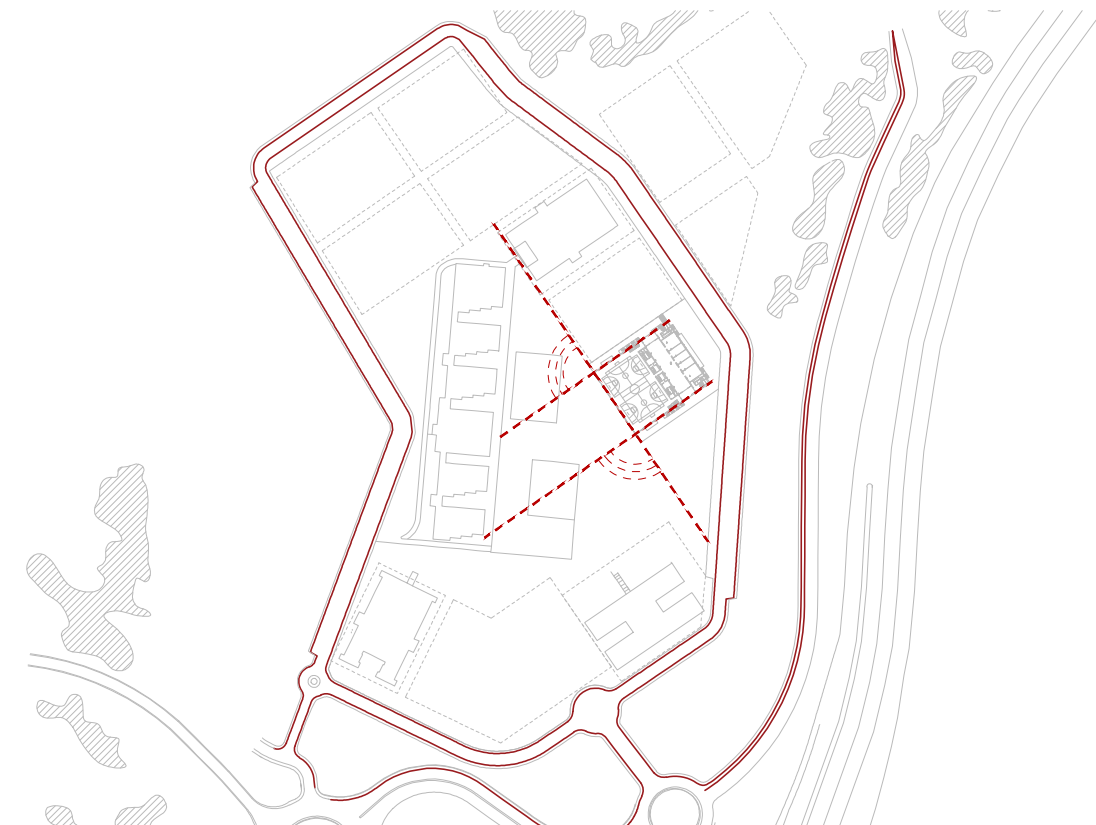
In this case, the project pretends to be a landmark which acts as connecting point between two urban fabric. On the one hand consolidated urban fabric and, on the another one, an industrial urban fabric. Urban typologies mark guidelines for the project location.



The project belongs to a campus college. Existing buildings mark reference heights, porosities, orientations and important axes.



Several strength axes are recognised and influence building orientation that responds to people and vehicles circulation. On the other hand, highways are behind the building, then it opens to the city.



Building aligning is related to parceling and existing roadway. Every facade responds to an specific context, establishing a dialogue with surroundings.

## A PROFESSIONAL MATTER

An intimate way to enhance built architecture

### Civic center

“Cristalleries Planell”

*Contest: Barcelona, Spain 2010-2016*

*Architects: HARquitectes*

Building is a public equipment formed by an adult education centre, a language standardisation consortium and a space for organizations on a triangular plot. In addition to the characteristic plot shape, project has to face the conservation of two facades of the old “cristalleria planell” protected by heritage.

The building makes use of the entire plot and acts as an intrinsic part of the urban landscape. However, due to the plot shape and the classified facades prevent it from occupying the entire site.

The building is distributed across four levels and it generates a courtyard that provides a heat and sound barrier between the protected facade and the new building facade. This courtyard is useful to reduce triangular geometry and generate relations between the exterior and the interior of administrative uses through the courtyard that, at the same time, acts as a visual filter.

The access to the building is made through one of its vertices by means of a semi-open space defined by a ceramic latticework and glass bricks, providing diffuse lighting through the latticework and the cover.

Courtyards act as natural air recovery; the inertia of the wall structure is used in winter. In summer, thanks to solar chimneys that generate Venturi effect, air circulation is guaranteed, dissipating as much heat as possible and getting fresh air from courtyards.

A building for natural circulation control of heat circulation that generates optimal comfort standards.

As for materiality, the original work establishes direct relation with the material used in the protected facades enhancing it and using it as another building element. Protected façade is completed by a wall made with glass blocks, transmitting a transparent feeling from the elevated part.



### Equipment

Crematorium of Hofheide

*Contest: Belgium 2006-2015*

*Architects: RCR*

The Flemish plain contains a vast landscape which shapes a gentle swampy basin at this point of Hofheide and it forms an extensive sheet of water. Crematorium strengthens the swampy basin giving rise to a bigger one.

The building mixes with its surroundings thanks to its materials and location.

The homogeneity provided by concrete together with hanged Corten steel remembers a tree with its trunk and branches; these material elements in spite of its heaviness and clearness transmit lightness feeling.

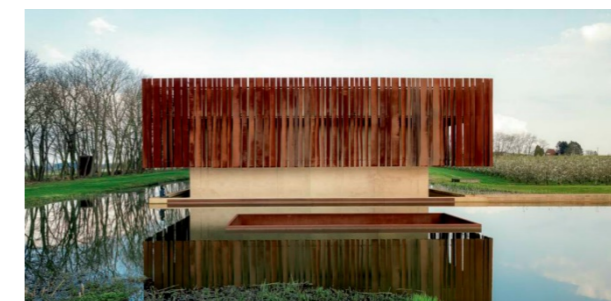
These characteristics try the most to link the building to its surroundings. Moreover, it takes part of the existing road between the different cemetery zones complementing and improving circulation.

The insides, formed by big height spaces, are flooded by light from the cover, analysing the way to go into it so as to make it be an appeased and diffused light that accompanies the grief of those who need it.

Visual filters separate the atmosphere and differentiate spaces to be, walk and wander.

«Strolling to the meeting point, walking in company, gathering together for consolation in a space that is close to nature as possible, enhancing our sense that we are part of it preparing the leave-taking ceremony, without any pre-established belief or culture in a space that provides shelter for grief, music, the embrace and words.»

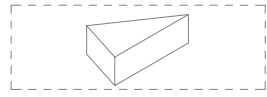
**(RCR)**



"Cristalleries Planell" Civic centre

CONCEPT

• Idea:



• Shape:

- Dimensional:
- Subtractive:
- Additives:

• Image:

- Use of colour:
- Texture:
- Porosity:

CONFIGURATION

• Structure:

- Symmetric order:
- Central symmetric order:
- Asymmetric order:

• Space:

- Direct relation:
- Indirect relation:
- Intermediate relation:

• Circulation:

- Between spaces:
- Through spaces:
- Get to a space:

INTERACTIONS

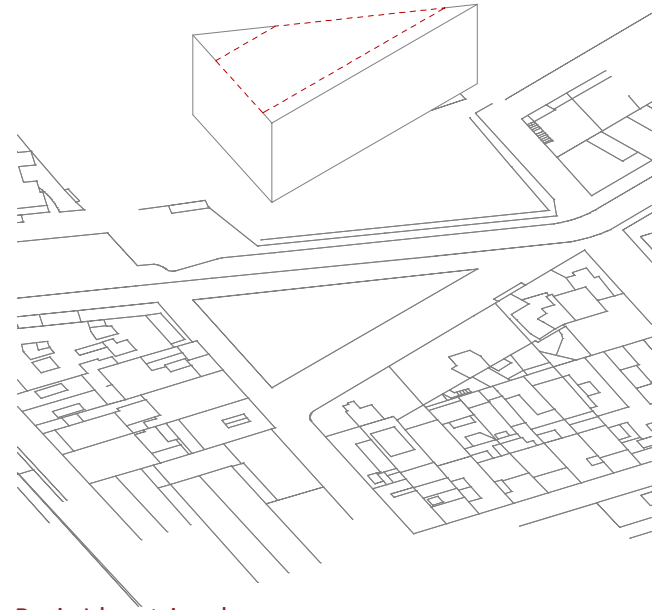
• Place:



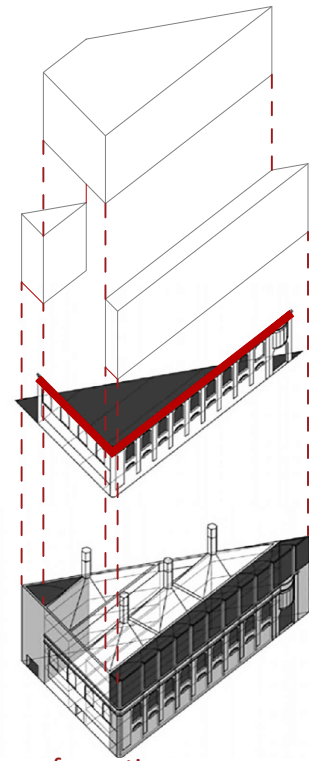
• Relations:



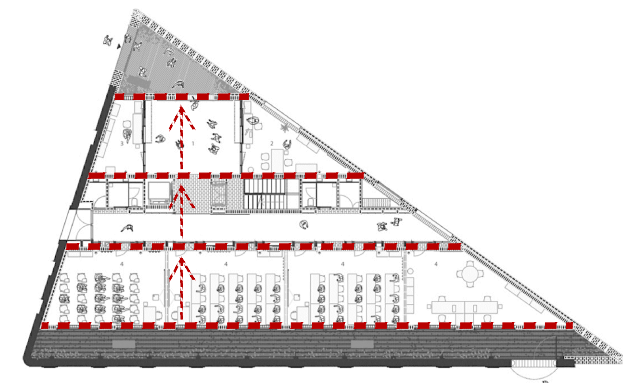
• Perception:



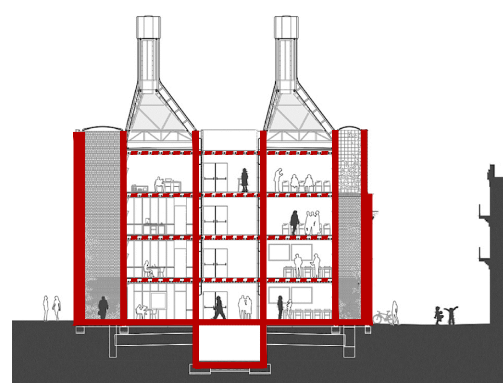
Basic Idea: triangle



Subtractive transformation



General structure: symmetric order

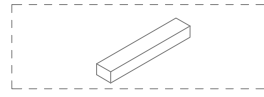


Mural structure: it establishes organization axes

Crematorium of Hofheide

CONCEPT

• Idea:



• Shape:

- Dimensional:
- Subtractive:
- Additives:

• Image:

- Use of colour:
- Texture:
- Porosity:

CONFIGURATION

• Structure:

- Symmetric order:
- Central symmetric order:
- Asymmetric order:

• Space:

- Direct relation:
- Indirect relation:
- Intermediate relation:

• Circulation:

- Between spaces:
- Through spaces:
- Get to a space:

INTERACTIONS

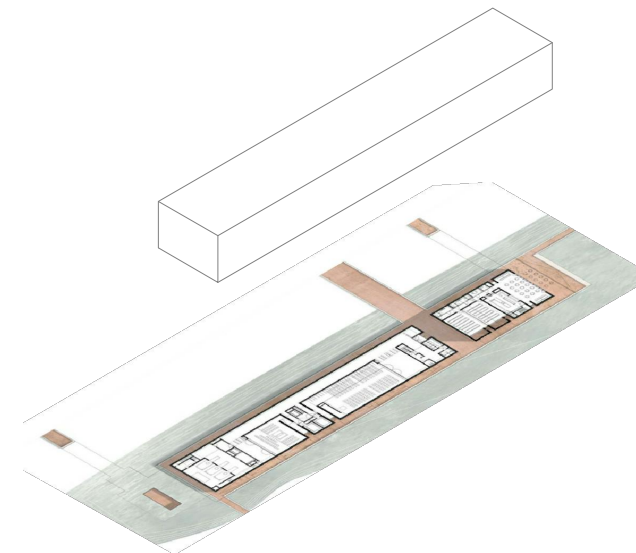
• Place:



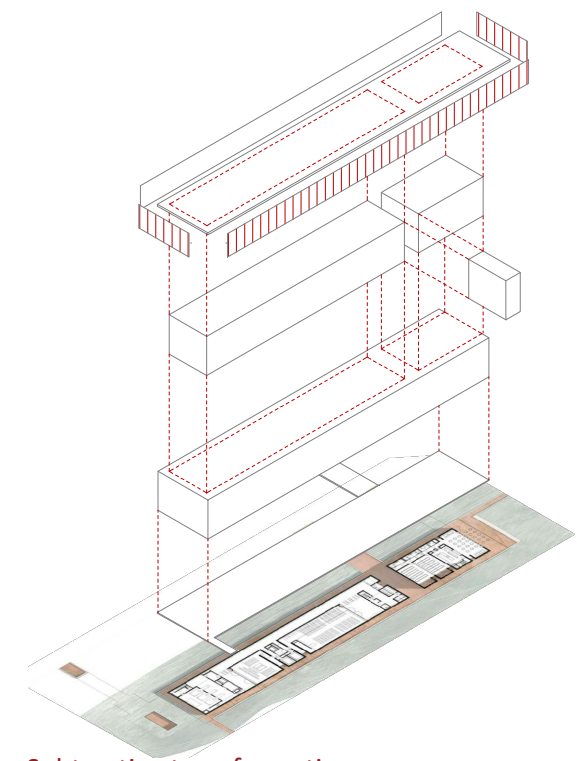
• Relations:



• Perception:



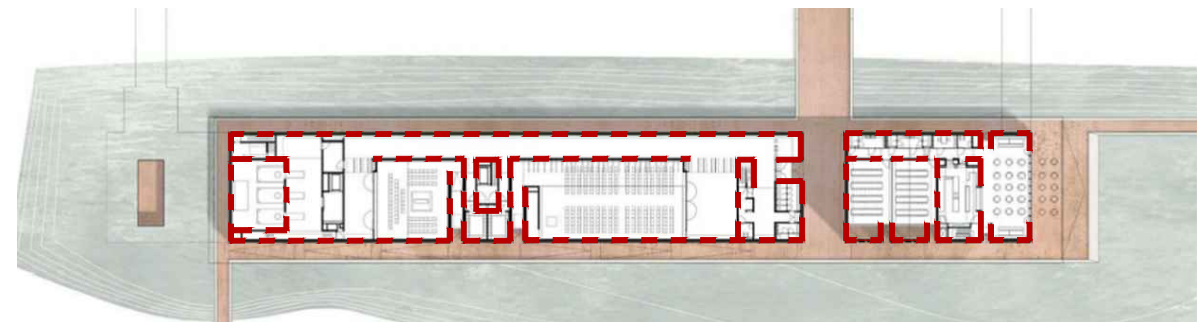
Basic idea: rectangle



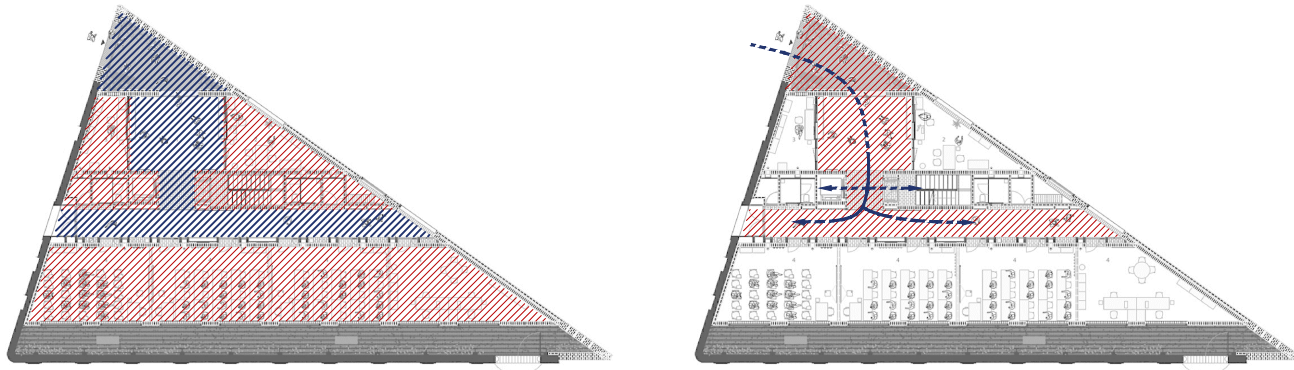
Subtractive transformation



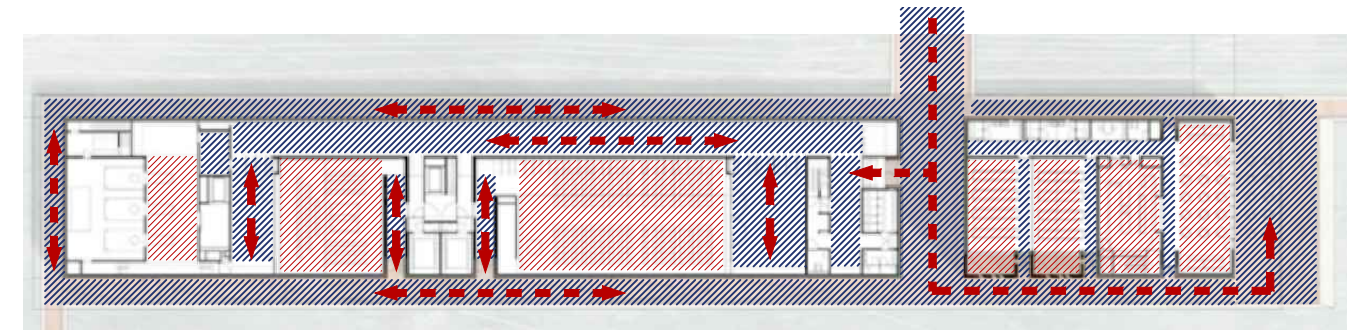
General structure: asymmetric order because all the walls define the structure.







Spaces: red »primary spaces. Blue » secondary spaces. A direct relation is generated by means of shared space which, because of its characteristics, adopts an own personality. Circulation through spaces.



Spaces: red »primary spaces. Blue » secondary spaces. Direct, indirect and intermediate relations with the aid of filters, corridors and ambulatories. Thanks to these relations, 3 types of circulations are generated. This project turns circulation spaces into places to be and walk.



Image: use of colour. Light tonalities raises luminosity

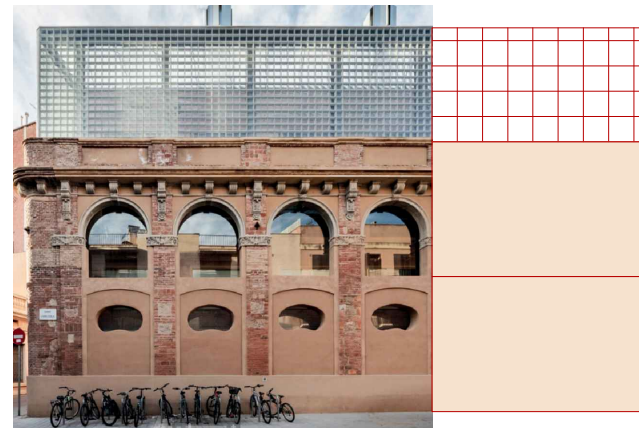


Image: texture. Contrast between bricks and glass

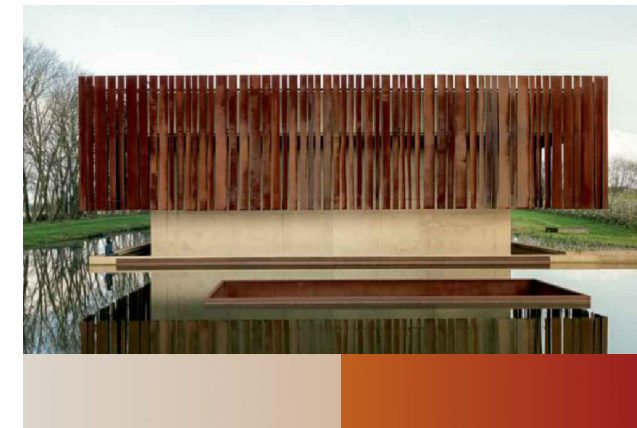


Image: use of colour. Contrast between red tonalities and neutral concrete colour

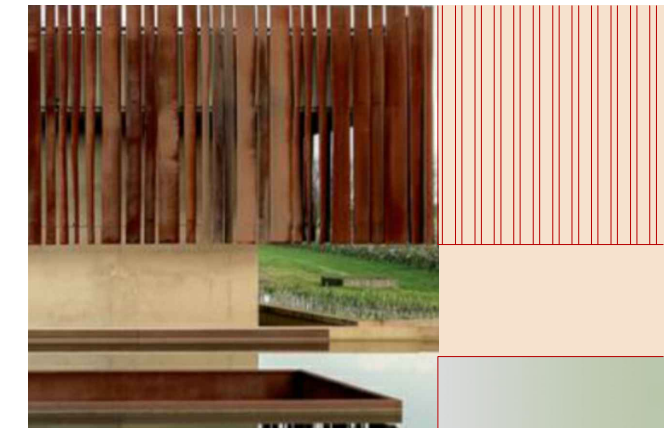


Image: texture. Contrast between hardness concrete and apparent lightness steel

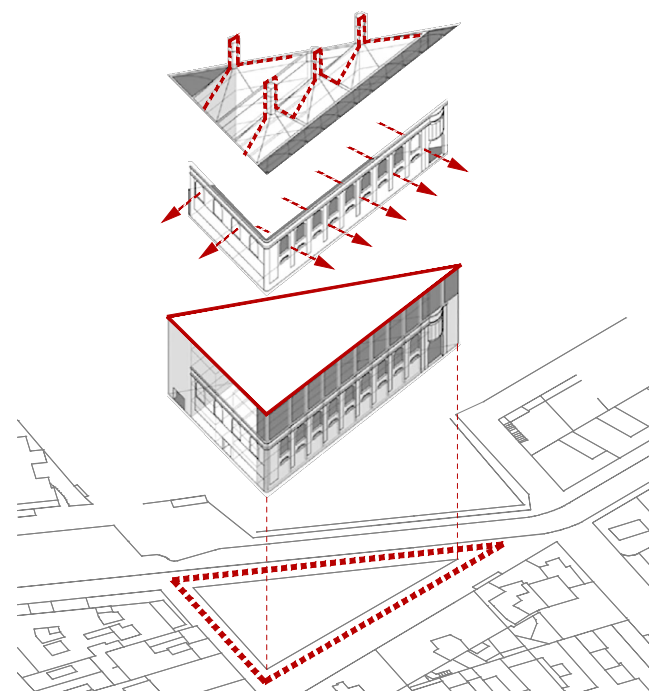


Image: porosity. Cover breaks with building continuity.



Perception: Natural light incidence through courtyards and covers

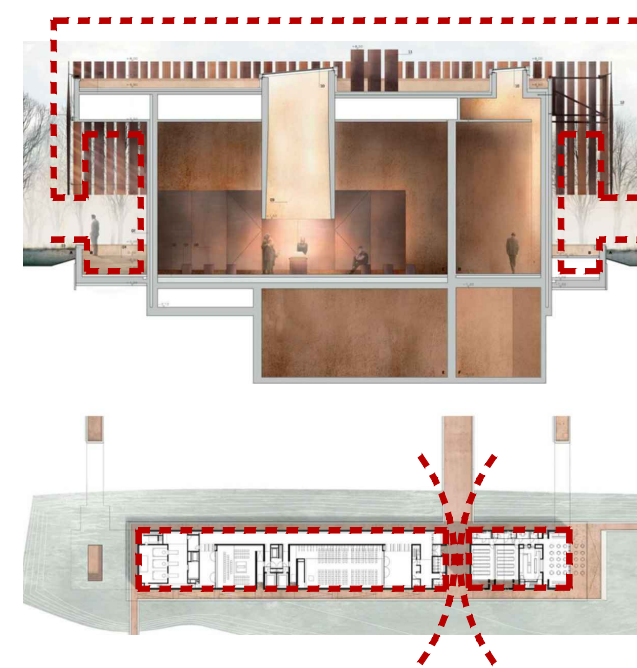
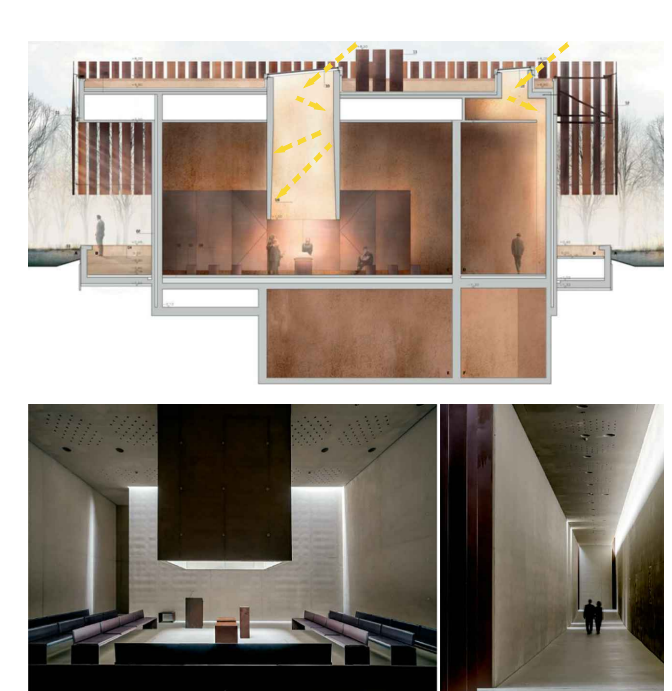


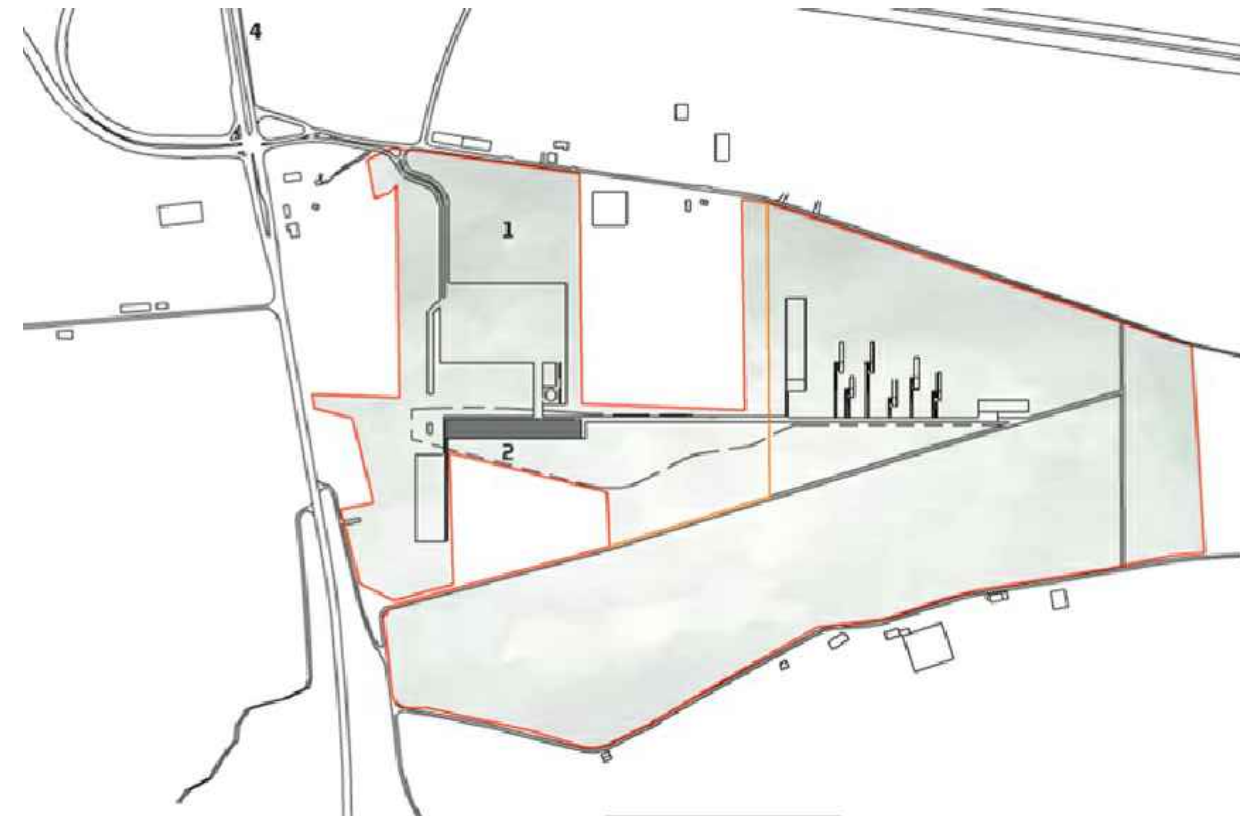
Image: Porosity. Volume continuity is interrupted by the access and, at the same time, by ambulatory.



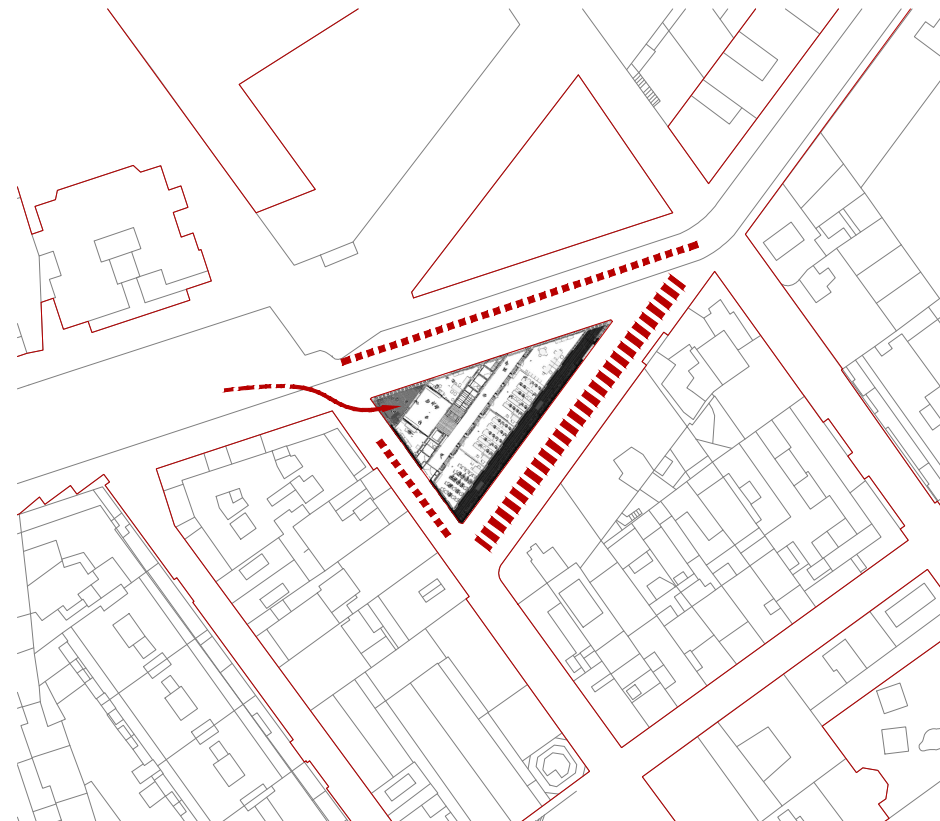
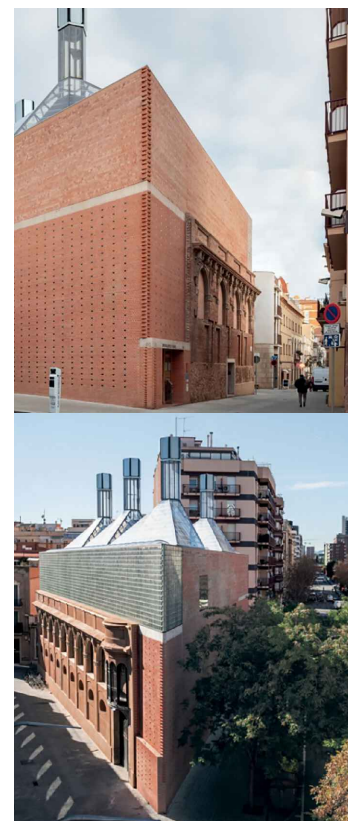
Perception: indirect overhead lighting floods the spaces.



The project is situated in a consolidated urban fabric, within a plot defined by two protected facades



The project is situated in a natural surroundings flanked by a motorway and a road. A natural swampy basing that defines the spaces is formed in the zone.



Building is related to its surroundings by means of materiality and shape. The north facade is harder than protected south facade which is more transparent than the first one. Building brick technique integrates the existing protected facade. The cover formed by chimneys suggests a past memory



The building is related to its surroundings by means of materiality and shape. The material hardness is decreased thanks to the water of the swampy basing. The building takes part of the road between the park and cemetery

## Conclusions

This research project starts with the objective to establish a theoretical framework that revolves around architect's profession to get closer and know better his function as professional and the tasks that he develops.

The architect job idea is generated by the comparison between definitions and concepts that have been posed by thinkers and professionals. The architect relates to the good use of techniques that uses to turn material into shape and the tactics that relate the concepts. At the same time, he is immersed in the project process so as to be developed as architect; this project process refers to the approach to follow when giving solutions to problems or specific needs.

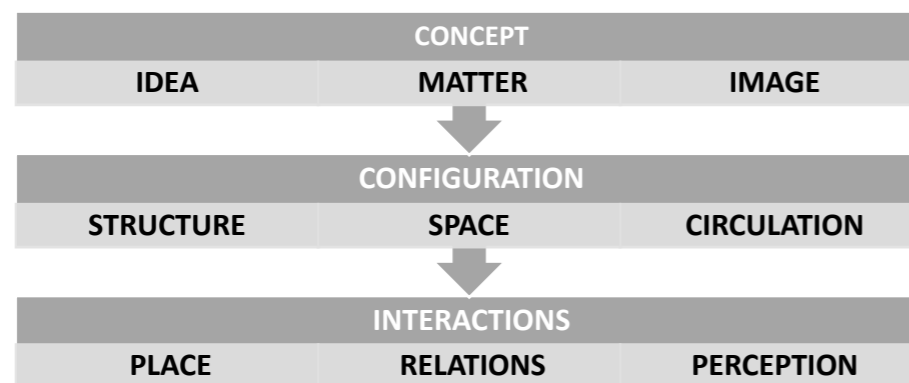
We observe that the project process is formed by two big groups: the concept and its materialization. To put it in another way, the idea and its construction.

Knowing better some project strategies for the spatial definition and specific volumes is one of the bases on which the matrix, that is created in this research project, is suggested.

The intention when defining this matrix is to suggest a logic way to get close to architectural works and its conceptual aspect to separate them and comprehend this project process in which the architect is immersed when developing it.

The ideas that form the matrix are general and specific, with the aim to be able to get a first contact to the projects that allows us to identify some points that define and characterize the project.

The proposal and defined concepts are the following:



Once the concepts have been established, they are put into practice, and it is tried to identify them in 4 chosen projects and see if we can separate them with the matrix help.

All the defined matrix concepts can be identified in the 4 analysed projects, every concept is treated in a particular way that responds to a specific way to do.

In every project matrix ideas are not only identified but also several ways to apply the same concept in different spaces and with different goals, are observed, and with the essence of the basic idea.

An example of the previously said could be circulations. For every project a specific way to circulate is defined and every project improves the idea. The same happens with the light perception, because we find multiples ways to light an interior up and with really different aims. That provokes that we can locate the specific idea in every project but, at the same time, every project enriches it in several ways and with different purposes.

The same happens with the rest of ideas, all of them can be located in the projects but they are specific and different for every project.

From this fact we can realize that despite being able to identify some tactics or general logics, every project process gets to a different aim in spite of the need being the same, because there are a lot of factors that come into play.

That is why matrix is a living tool that will be enriched analysis after analysis, because it will find new ways to define the same concept/idea

From this analysis we can conclude that the matrix ideas will help us to establish the first contact to get closer to a new project and identify some characteristics that define it, but it is important to continue separating many things more of every project to be able to comprehend and understand it completely. That is, matrix ought to be configured by many other concepts and ideas to be able to express opinions about the projects.

On the other hand, it can be concluded that this matrix is valid and it will help us to classify projects, have reference points to compare, know some origin ideas to have a model and being able to apply in possible future projects.

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