

**FROM THE BELEM'S TOWER TO THE RIVER MOUTH OF  
JAMOR**

**CENTRO CULTURAL DE ALGÉS**

“tectonicART epicenter”



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Extended of the Dissertation to obtain the Master Degree in

**ARCHITECTURE**

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**May 2018**

## **FRAMEWORK AND INSERTION IN THE STUDY PLAN**

This project report was written as part of the course Final Project 2, inserted in the second half of the M. in Architecture of Instituto Superior Técnico. The exercise was developed through a proposal of the Lisbon City Council, with the objective of reformulating the coastline between the de Belém's Tower and the Jamar's mouth river.

## **THEME**

The cultural center of Algés arises from the consolidation of the urban network and from the apprehension of the needs that the design of this urban network implied, together with the tourist and cultural dynamics of which Lisbon has been in the spotlight in the last decade.

## **MOTIVATION**

Significant infrastructure and equipment have been defined in the urban scale of the proposal, which respond to the expectations of the population and municipalities, since the Municipal Master Plan of Lisbon intends to return the riverside front to the people as a synergistic potential for economic development, namely tourism.

## **REPORT STRUCTURE**

This report is organized into three parts, corresponding to chapters, which are distinguished by their nature but that underpin and complement each other.

In Chapter 1 - State of the Art - makes up a general framework of urban design concepts catalysts, focusing on some examples and ideas of contemporary authors.

In Chapter 2 - Characterization of the Area of Intervention - the area of intervention corresponding to the Algés maritime promenade is described in detail, in order to inform about its transformation capacity and to evaluate the implications of the existing conditions in the proposed development strategies and installation of a cultural center.

In Chapter 3 - The Proposal - the solution tested for the urban scale is described, gradually reducing the work scale to the building and selected program for the Cultural Center of Algés.

## **TERRITORY ANALYSIS**

### **HISTORICAL AND SOCIAL BACKGROUND**

Lisbon, since its origin, has always lived the river Tagus. The peoples of the Mediterranean and the Atlantic coast, moving along the coast of the territory that is now Portuguese, entered the estuaries of the rivers and sailed whenever the rivers allowed, quite inland, in the search for trade. The first major

transformation took place during the thirteenth century with the progressive sedimentation of the Tagus estuary, which resulted from the installation of a new population that moved with the advance of the Christian domain and the agrarian soil of the fields around the perimeter surrounded by the primitive Islamic nucleus -visigodo, finally buried the little that remained of the old Roman city.

The demographic growth of the city of Lisbon of the sixteenth century implied that the riverbank was significantly altered by successive landfills that subtly modified the design to its natural coastline. Until the middle of the nineteenth century, in the area bordering Algés, it was generally uninhabited. Algés was essentially reserved for a more interior zone (known as "Algés de cima (uptown)"). According to Levy Nunes Gomes, in " Algés - throughout the Time, " in 1865, the inhabitants of Algés were only 77, and the number of workers who worked there was close to one hundred.

The development of land transport has given the beach movement a greater social dynamism, and the social valorization of new leisure practices has led the upper bourgeoisie to appropriate the new summer habits. The marginal strip of these new spaces, in the width of fifty meters, is considered of public domain and handed over to the jurisdiction of the Port of Lisbon, being autonomous management. Today, all the riverbank of the Tagus estuary, from Vila Franca de Xira to Barra, is managed and has the jurisdiction of the Administration of the Port of Lisbon.

The infrastructure of the Port of Lisbon, from the forties to the sixties of the last century, gained importance and dimension to the maritime transport of passengers and goods between the "Metropolis" and "overseas" - construction of Marine Alcantara Gares and Rocha - with the nationalization of the distribution of fisheries - construction of Docapesca facilities at Pedrouços dock - and the implementation of dock, loading, unloading and transport equipment along the shore, especially between Santa Apolónia and Matinha. The years preceding the revolution of April and following it, first by excessive Venality the administration, then for compliance and delay of its restructuring, assisting the formation of a new and wide monolithic ring, made of underground construction and that results from real estate speculation, which involves the great region of Lisbon, from Oeiras to Vila Franca and from Montijo to Almada, continuing the Tagus to be its center, but now only geographic.

Both the north bank and the south bank of the Tagus, the city receives the enormous impact of the increase in containerized shipping, storage and handling of solid and liquid bulk, tourist cruises, recreational boating and river passenger traffic and of unprecedented scale and of multiple consequences, but always under the action of the Port of Lisbon. There are frequent places along the river that offer potential alternative uses, without prejudice to the port activity, revealing the opportunity of the city to regain the multifunctionality that, since its formation, has characterized its water's edge.

The truth is that the implementation of the hard railway infrastructure, installed in the late nineteenth century, accompanied by the no less shocking road infrastructure, which grew from the mid-twentieth century, continue to divide the city despite the events that intend to connect it.

## LOCATION AND DESCRIPTION

The study target area is located at the intersection of the districts of Lisbon and Oeiras, along the riverfront between the Tower of Belém in the east, past the dock Pedrouços, the village of Algés and the mouth of the river Jamor the West. It is a territory strongly marked by the existence of transport infrastructure and maritime activity, constituting a strong scar on territory and render an open relationship between the population and the river.

## PROPOSAL

### STRATEGY AND CONCEPT

To be able to generate an urban unit, recognizing the potential of the territory and integrating it in the North-South axis, with the purpose of returning the usufruct of the coastal margin to the South, to the buildings to the North. The reoccupation of the margin, through its use, should not alienate the historical identity of being a city located in the border facing south of the Tagus River and that has always lived it since its origin.

## URBAN PROJECT

### WATER FRONT

It is proposed a new design of the coast line for the territory to intervene and that integrates the city, as a new water front, extolling the relationship with the Tagus.

The extension of the pontoon extending from the Champalimaud Foundation and the pontoon of the VTS Tower will allow a new design to the Dock of Pedrouços, which ensures the increase of the dock area. Its simple design, through the regulation of the inner edge by repetition of a line parallel to the railway line, assigns a homogenous character which provides new uses the water front.

### USES AND PUBLIC SPACE

The major changes in the mobility infrastructure allowed the area to be liberated, freeing up space, which made possible the origin of a new center of extreme relevance for the structuring of the project. This was the case of the dismantling of the last section of the "CRIL" viaduct "And the spaces for buses and trains, which will give rise not only to the third crossing on the Tagus, a large central square and the cultural center to the West.

The implantation of the square allows an improvement in the definition of the Algés node as the center of the mobility infrastructures, improving the organization of the road flows, as well as the construction of the railway station of Algés on the square and by the capacity of ample connection between the two sides of the railway.

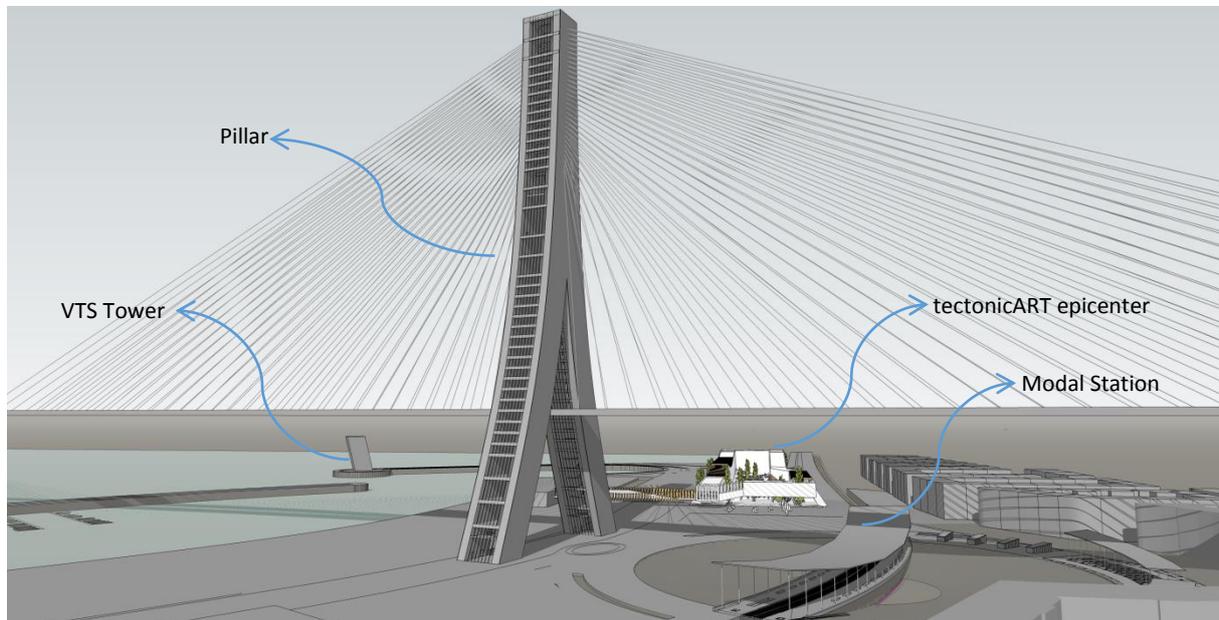


Illustration 1 | Uses

The pillar, in addition to its vertical domain, its central location on the ground makes it the most prominent element on the river front. Assuming structural functions of the 3rd crossing of the Tagus, as well as for the capacity to receive a hotel equipment that integrates several valences. In the West Pedrouços Dock is located a new River Station, This is part of the new set of interface in the city, which will allow it to be a point of arrival and departure from the territory.

To the north of the River Station and near the train line is designed a block, in which stands the Cultural Center of Algés. It offers a variety of cultural spaces, such as exhibition halls, auditoriums, theater with capacity to host a resident theater company, multipurpose halls and social and leisure areas which will be covered in detail in this report. The built complex consists of a wall that lands and rises from the ground allowing this dynamic to have functions both inside and outside.

## URBAN MOBILITY

Taking into account the underutilization of CRIL and the inability to respond to the 25 April bridge in relation to traffic, the plan arises to build the third crossing over the Tagus, through a new bridge linking Algés - Trafaria, dismantling the viaduct of the "CRIL", freeing the space to implant a new mobility network in the city. In addition to the construction of this great infrastructure, on the side of Lisbon, next to Miraflores, another section of the clover was built that allows the exit to Algés, in the direction of leaving the bridge. In this zone are also added two sections that allows the entrance to the bridge with meaning to the Trafaria and the exit to Algés of who follows of the interior of Lisbon.

Through the liberation and transformation of space at ground level, it has created a large node, which allows not only better organization of traffic routes and means of transport, but also creates new points of road and pedestrian crossings riverside. It is a circular geometry node, which acts as a great both as a continuation of the Avenues India and Marginal and intersection with the avenues Dom Vasco da Gama and Boulevard. With regard to the means of transport, the position of the bus station at the boundaries of the surrounding area of the square allows an effective connection with the train station which is built on the square. Thus, this interface requires the city an organized model of means of transport, which enables quick transition, arrival and departure of people.

## PROPOSAL FOR THE INTERVENTION OF THE CULTURAL CENTER

### CONCEPT

It was with the principle of the wall building that the architectural proposal was developed. This intention of "wall" is shaped and reinvented by the movement associated with the earthquake of tectonic plates, not by the destructive force, but by the elevation of this energy in association with the different disciplines and cultural movements that there (within the wall) concentrate and create tensions that conform the space allowing their living in unlikely spaces resulting from the convergence of these tectonic displacements.

### ARTICULATION WITH THE ENVIRONMENT

You are positioned on the urban scale, the northern riverfront and the West Pillar of the new crossing of the Tagus River and the Plaza receiving Modal station to which appears suspended in order to invite people to these live spaces. An air passage that allows direct access to the southern river station that presents architectural piece while influenced by the characteristic movement of the waves and an underground passage which allows the North crossing the railway line was considered safe.

### MORPHOLOGY

The building of the complex consists of a set of spaces unified by an apparent wall that rises, levied and rests on the ground in strategic points that allow access to the complex and the experience of the spaces that are created with these moments.

### FUNCTIONS AND ORGANIZATION

In the building were created 5 main areas, complemented with 3 large areas in the exterior that can so much affect what happens in the interior spaces, as well as to provide independent and autonomous activities and events of those that occur in the interior. Inside the building, the interior spaces we have a cine theater, Arts Workshop, library, catering, multipurpose room and auditorium. Outside we have a leisure area and 2 event zones that will work individually or in unison according to the nature of the event.

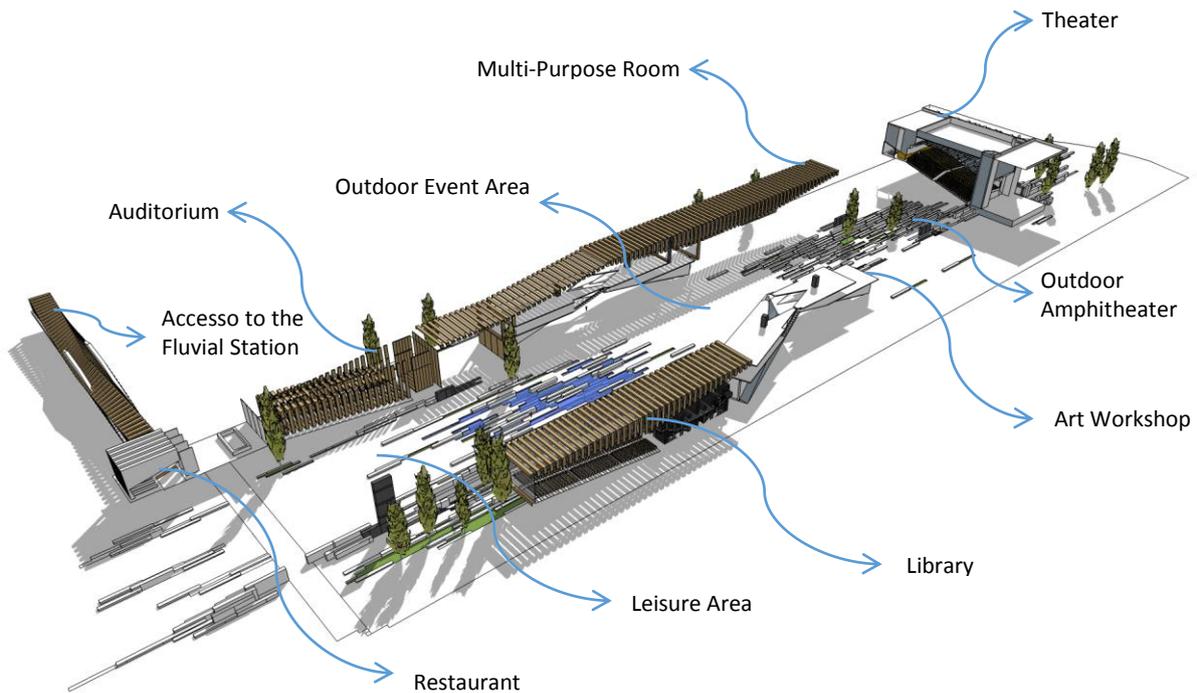


Illustration 2 | Uses

The underground floor has the function of accommodating the interior parking, technical areas, storage and warehouses, as well as the sanitary facilities dedicated to the space that serve in the upper floors. The access to the complex are guaranteed in the areas where the wall rises and in these passages also have access to the interior of the building.

#### SPACE, THE EXPERIENCE AND THE ENVIRONMENT

As the building complex, characterized on its perimeter by facades of opaque vertical cloths they were created unique moments for each place of the complex, both inside and outside resulting from the combination of size, function and intention of beauty that provide an worthy of the human condition.

#### CINE THEATER

The complex has a Cineteatro with capacity to host Theater companies permanently, equipped with a rehearsal room (in the space "Oficina das Artes"), dressing rooms, administrative spaces, warehouses and carpentry.

#### THE LIBRARY

The library space is divided into three areas (administrative, archiving and reading room / auditorium) being granted access to the administrative area having the file in the central zone while noise barrier between the top two spaces with different functions. The reading area in auditorium format can, for example, support book launches organized by the library or conferences of artists exhibiting in the complex.

#### THE AUDITORIUM

The auditorium is mediated between the atrium to the west and a restaurant and beverage area that serves both the auditorium and a terrace overlooking the Nascente area of Algés and allowing access to the airfare connecting the river station.

#### THE MULTI PURPOSE ROOM

The Multipurpose Room is characterized by being simply a large void with 120m long by 15m wide with 20m of right foot, capable of receiving any type of event such as fashion shows or concerts.

#### OFFICE OF ARTS

The space of the Arts Workshop is a space that enables the development of artistic and cultural activities using the rehearsal rooms and training spaces. You can also receive with permanent character a theater company that manages the cultural both of the cineteatro and the Oficina das Artes.

#### THE RESTAURANT

Facing Algés, we have a terrace area that serves the restaurant that will support the whole complex during and off the calendar of events.

#### THE WATERPLAN

The water plane is made up of "tectonic" blocks that rise at random while contemporary cromlech. The "tectonic" blocks also create a slight labyrinth that we can traverse, sit and observe that replicate this game under the plane of water, alternating between depths between them.

#### THE OUTDOOR

This space arises from the progressive unevenness of the blocks on the ground in order to achieve a subtle amphitheater without any marking of places. It is a space without rules and in prejudices directed to all the society that wants to be there.

#### THE CENTRAL SQUARE

The central square plays the kneecap function of the whole complex, connecting indoor and outdoor spaces with each other.

Despite being a privileged area of circulation, given its size of approximately 2500m<sup>2</sup> you can receive various events or outdoor exhibitions.

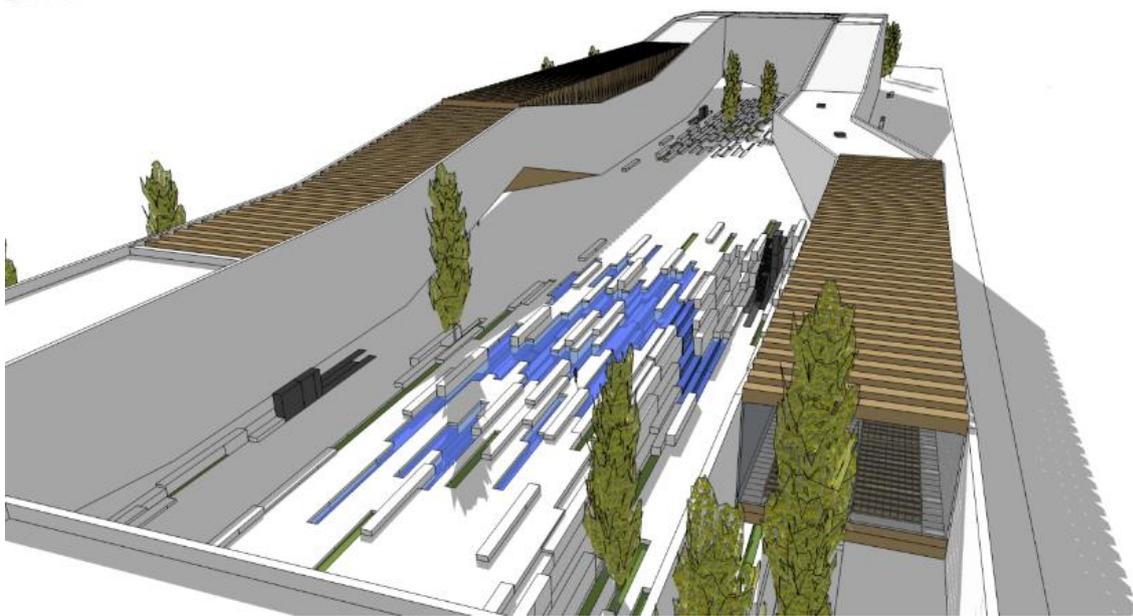


Illustration 3 | Central Square

#### CONSTRUCTION SOLUTIONS

For the most part, the spaces are constituted as empty volumes, without any apparent slab, thus constituting lighter volumes.

Some bearing structures are of a metallic nature that guarantee the structural strength being additionally more slender.

Some of the equipment has wooden structures that almost exclusively guarantee the stability of this equipment and may also contribute to the whole.

At the level of finishes, it is intended to assume the materials used in its structure complemented with glass and some areas plastered inside and painted outside.

The facades will be in white concrete having expansion joints in the critical segments of the shape, as with transitions of planes and intersections of elements, thus taking advantage of this joint for this specific effect.

#### FINAL CONCLUSIONS

Over the different moments in history, the Lisbon riverfront and its coastal design were shaped according to the needs of the city, involving successive landfills that have advanced the city over the river. The urban and architectural proposal for the area of intervention intended, so give this place a continuous public space, improving the system and accessibility and aims to promote new forms of dialogue between the city and the river, integrating cultural facilities in the area of the epicenter intervention.

The intervention proposal presented in this report integrates the definition of the design of a square, the habitable pillar of the new crossing over the Tagus and the Cultural Center of Algés.

The development of the cultural equipment proposal results spontaneously from the proposed intervention for the urban scale. The Cultural Center of Algés is thus supported by the growing need of

equipment of this genesis that have all the necessary infrastructure to perform cultural activities as well as providing the spaces of greater dignity to meet the need and demand for more multipurpose spaces that can receive everything the kind of cultural events that reinvent themselves each day, branching out into new cultural trends.

Within the apparent wall that constitutes the complex, there is a large patio of about 11500m<sup>2</sup> where outdoor cultural activities such as art exhibitions, sports fairs, among others, integrating diverse spaces into a single one that allow different activities. There is an economic advantage in the diversified offer in the complex, as it allows the spaces can be used for various functions and synergistically potentiate the use of others in the complex or in its surroundings.

The proposal presented establishes a functional and environmental balance worthy of the human condition that the territory currently lacks. The building that allows its use both inside and outside becomes a central element in the city for its ability to connect with the surrounding area, as well as the artistic aspect as a place reference, becoming a new cultural epicenter that serves whole society.

It is understood that the Architectural proposal responds to the objectives of the requalification of this territory of the city, in the sense in which new forms of articulation between the different infrastructures associated to the mobility were found, valuing the continuity of the public space and proposing new collective equipment and morphologies urban

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