SEAMBIOSIS in Palma de Mallorca. Awarded project in Europan 13 competition, 2015.

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I. INTRODUCTION

The concept "symbiosis" can be defined as "a close and usually obligatory association of two organisms of different species that live together, often to their mutual benefit".

In this sense, Palma and its inhabitants have kept a natural relationship with the sea along its existence as a city until very recently, talking in historical time terms. This natural relationship, this symbiosis, was broken just in the moment of appearance of a new economic model based in an environmental (ab)use of the nature and the beauty of its location and landscape scene: The massive tourism from the 50s-60s.

This new economic model changes the social patterns of public space use in the city; the public space, understood as the shared space in the city where the inhabitant felt himself represented in the urban scene and where could be recognized by the others. So, this space, where the visitor could appreciate the singularity of the place, fall down with the disappearance of the human scale in the modern urban planning conception, that prioritize the concept of "mobility" based in the use of the private vehicle, promoting the creation of disconnected zones in function of its predetermined uses defined, previously, by the urban planner, approaching the city as a mechanism (dehumanising the city and its inhabitants, -see Le Corbusier urban planning theory-) instead treat the city and its inhabitants as a complex organism with a delicate balance with it self and with its surroundings. Arrived to this point, the existing symbiosis between the city, its inhabitants and the environment around disappear. And that is what happened in Palma since the 50s-60s until nowadays, specially at its waterfront, where the use of private vehicle has ousted the pedestrian and eliminate its public space, creating a long and wide fracture alongside the urban shore (in form of motorway) that make impossible the natural and traditional connections between the people and the sea as it was before the new city urban planning model.

This is the problematic situation that our project resolves through 3 urban strategies with the objective to return to a new symbiosis at the public space of the promenade between the pedestrian, the city and the sea. This is the reason because of we entitle our project as SEAMBIOSIS.

These strategies are defined as: 1 COASTAL AXIS, 2-IN-LAND CONNECTIONS and 3 ERASING BOUNDERIES, which aim is to recover the symbiotic relationship between the pedestrian, the city and the sea through specific actions along the waterfront and its inner city connectors. These actions are related to design and recover the urban and natural connections city-to-promenade, the creation of a tramway lane alongside the promenade; enlarge, recover and improve the public space for pedestrians slimming the motorway and parking areas and the elimination of urban and architectural barriers.

In this Memory we present our project revising, firstly, what define the waterfront of Palma, especially from Medieval Age until nowadays (Chapter II). Secondly, and following a logical analytic approach, we describe the problematic situation that Palma and its waterfront suffers currently. Even being a describing task, it is an important point that permits us to introduce the justification of our project (Chapter III). After this, we present the key points of our project, presenting the strategies and actions to carry out in order to get the objective of the project (Chapter IV). Finally we present the final conclusion (Chapter V) and the economic viability of the project (Chapter VI).

II. THE PAST AS A MAP SHOWING US THE WAY

The Mediterranean Sea is the cradle of the occidental's modern world civilization. Our present culture, codes, philosophy, economy, politics, arts and cities are a legacy of this tremendous and powerful region of exchange between different ancient civilizations located around its shores through several routes for trade, colonization and war. In fact, the origin of the city in our civilization is a Mediterranean cultural production.

Thanks to sharing a similar climate and an access to a common sea, it was possible the creation of numerous historical and cultural connections between the ancient and modern societies around the Mediterranean Sea.

Is in this cultural and historical context where the city of Palma, the current capital of Mallorca and Balearic Islands, must be understood.

History of Palma's waterfront. From Medieval Period since today

It was King Jaume I at 1273 who gives the shore zone to the City government with the condition that the building it was not permitted, except if it was the city, as a corporation, who was the builder. Because of this, many public buildings (some of them present nowadays) related to the port activity were constructed by the time:

-Consoltat de Mar (Maritime Court)

-Llotja de Mercaderes (building dedicated to exchange and merchant activities)

-Drassanes (dockyards for shipbuilding)

-Porta del Mar (sea entrance by land at port)

-Pontó de la Llotja (pontoon in front of the Llotja de Mercaders)

-Torre d'en Carrós (between the city and Porto Pi)

-Moll de la Portella (used for the wall's blocks unload)

From 1270, just in front of the Almudaina (Castle close to the Cathedral) exist a little port or dyke that was enlarged by the time. It was during the 19th century where the most notable increasing was carried out since the Middle Age. This is the origins of the present port facilities and the promenade. From the beginnings of 20th century the buildings and the extension at the port kept pace us much at City as much at Porto Pi and Sant Carles Castle, at the opposite point of the city bay. It was at the 50's when the Gabriel Roca Avenue, that connects the entire city waterfront, began to be constructed.

In this context, where the tourism began to be one of the most important economic activities, the appearance of cars became a symbol of progress, wealth and modernity. The modern urban planning conception was clearly focused on the high density buildings and the priority of the car instead the pedestrian; we can find the origins of today's problematic situation: The presence and the proximity to the sea, at human scale, by the pedestrians it is impossible because of the inaccessibility problems caused by the conflict between pedestrians (visitors and inhabitants) and the use of car at the waterfront. The symbiosis was broken.

III. THE PRESENT. WHAT IS WRONG AND HOW IS PALMA NOWADAYS? Current critical numbers of Palma. Description for the analysis and diagnosis at the waterfront

Critical numbers: Nowadays Palma, the capital of Mallorca and Balearic Islands (archipelago of four inhabited islands, being Majorca the largest one) contains the most of the population of the Balearic Islands. Palma has, at January 1st 2015, 427.973 inhabitants censed in the municipal register of inhabitants. According to figures of 2014, the population of the Balearic Islands is 1.103.959 inhabitants and Majorca has a population of 858.313 inhabitants. That means that the population of Palma represents the 49,88% of Majorca and the 38,77% of the Balearic Islands. It shows how important is the city of Palma, where the tourism becomes one of the most important industries which depends an important amount of workers and all kind of business, from self-employees to multinational companies.

In this way, these are the figures of tourists that visited Palma the last year:

- Arrivals from Sea Cruisers and visitors by Regular Lanes (from April 2014 to April 2015): 2.128.285 passengers
- Arrivals form Airport (From January 2014 to December 2014): 9.957.166 passengers. At least, the 50% of these passengers visit the city of Palma

That means that Palma increases his population per day in 22.000 people fundamentally during the period from Easter to October, that is the equivalent to 5% resident inhabitants. The figures are more significant having in mind that the population of the adjacent neighbourhoods to the waterfront is 60.000 inhabitants.

Other figures that show how complex is the current situation at Palma is the high amount of vehicles censed at Palma (lasted data available: Sept 2014): 295.295 units (including trucks, vans, cars and motorbikes) That means a ratio of 1,45 person per vehicle. Related with this figure, it is important to point that there are, at present, 8 parking zones distributed along the waterfront area and its zone of influence with a total amount of 2518 public garage spaces available of which a minimum of 1309 are classified as transition spaces (52%). In our project we increase this figures up to 3288 garage spaces (+23,41%), creating a new parking area at Gesa Park zone. So, maintaining the same proportion of transition spaces (52%), these figures up to 1709. With this action we solve, together with the reduction of the presence of private vehicles at the waterfront, the problem of parking along the promenade and its surrounding areas.

In short, these figures demonstrate that the Palma city model is designed and defined *for and from* the use of car against the use by the pedestrians in the public space. This is clearly evident along all the waterfront of Palma: Instead being a promenade, where the citizens, visitors and cultural and economic activities have a direct relationship between them and with the city and the sea for pleasure, the waterfront works as a kind of an urban coastal dual highway that connect the extremes of the city coastal axis, where the use of cars impede to people, of all range of age and (dis)ability, any possibility to move around in a safety, sustainable, clean, calm and attractive coastal urban context for pleasure, for instance: have a walk, enjoying the city and sea sights, practice sport, relaxing activities, cultural and economic activities (related to non disturbing activities). These difficulties are especially evident at the west section, where the orography, the high density building, the spaciousness of the motorways and the fences of the marinas narrow the public space for people.

This is because the prevail of the conception of modern urban planning practiced in Palma from 50's-60's (coinciding with the raise and the development of tourism as the leading economic activity in Majorca) to nowadays that have prioritize the use of car in the public space as the main beneficiary and the protagonist in the urban mobility, considering the use of private vehicle as the best way, for the city users, to get any point of the city with comfort, speed, privacy and individuality as key aspects. In this sense, the city resolve the problems of connections and parking invading more and more public space and land in the city. Therefore the public space for the pedestrian it has been reduced to an *existenzminimum* at everywhere.

In general, the promenade of Palma and its area of influence, it is well defined by the presence of a double motorway in parallel to the coastal strip with two to three lanes in each direction getting a great breath. In addition exist car parks on surface occupying the border of the roads and the central stripe. It works as a high occupation vehicle platform that connects the east zone (Molinar to Airport) and the west zone (Porto Pi to Cala Major) of the city by the waterfront. This two opposites sides are the vehicle coastal entrance to the city, connecting Palma to the Airport and South-East Majorca (East) and Palma to Cala Major and South-West Majorca (West).

Along this strip exist different sections with specific characteristics: From the east side entrance (Molinar to Airport), the traffic road is similar to a highway with three lanes in each direction getting in the city, finding at the right side, firstly, the south border of the west example of Palma (full of non defined spaces) with the unfinished Congress Palace and the abandoned Gesa building as predominant pieces. At left side, a row of residential and touristic buildings, being placed at the back side of the traditional and low density Molinar neighbourhood and the sea (Portitixol and ca'n Pere Antoni Beach). The traffic connections to the city are situated at the right side, which width decrease meanwhile the driving it is getting into the city following the waterfront.

After this section, at right, we find the old city wall and the beginning of a very different area defined by the presence of a rich architectural facade until arriving to the next section, that begins when the mouth and the Jonquet neighbourhood appears. In this area we find the richest architectural heritage of Palma. First of all, at the foot of the wall, we find the "Parc de la Mar". Until the 60's the sea reached up to the city walls, providing the perfect reflection for the Cathedral. When the building of the coastal road changed all that, the park with green zones and an artificial lake was constructed trying to reproduce this effect. Along this right side we can observe the presence of various historical buildings facing the sea: the Cathedral, Almudaina, Antonio Maura Av (connecting to Es Born and the city), Passeig Sagrera, the Llotga, the Consolat building (nowadays Regional Presidency HQ) and Es Baluard. Just in front of this area, at sea side, the historical port facilities and buildings are present: At first, the most modern buildings of the Port Authority and the Maritime Authority (that are the entrance to the port facilities and breaks the sight connection between the port and the ancient facade), after that, marinas, moorings, auxiliary industries, nautical services and fishing facilities, mixed with the presence of public space distributed between parking and leisure zones composed by some hotel stores, a park (invaded by fishing nets), cycle lane and green zones that are used by people to practice sport (mainly running and cycling) and walking. Because of all these aspects this area is the most related to the old city and its relationship with the sea, maintaining a kind of symbolic architectural representation and a most human scale than other sections along the waterfront. So we consider it as the most representative zone that shows *what and how* the promenade must be. Because of that we will define this space in our proposal as the "Palma City Core".

As we pointed before, the next section begins after a transition zone composed by the "Sa Riera" mouth and the Jonquet neighbourhood (an ancient outside city wall neighbourhood of fishermen situated up to a hill close to the sea and nowadays in an improvable situation) at the right side. From this point, until arriving to the Auditorium esplanade, the same diagram its repeated: the presence of the high density motorway and parking in

surface (even the auditorium esplanade works as a parking zone) breaking the access to the pedestrians between the city and the sea, and a narrow public space for people's leisure squeezed between the motorway and the marina's moorings (at the sea side with no fences along this section) and a narrow pedestrian pavement at the foot of the modern buildings row that contains, at ground floor, a sequence of hotel stores and touristic services. In this zone, the same as the following build row until arriving to Can Barbarà marina, the facade and the floor repeat the same pattern: modern blocks of flats and hotel buildings and stores with a non human scale that, beside the tremendous, noisy and contaminating motorway, repeal to the pedestrian any intention to remain there. The presences of wide spaces are a rare exception that it is been present only at the foot of scant block of apartments. By the same token, the connections to the city by car or on foot are scarce and non well designed, most of the times due to the difficult orography in that place.

After this section, and continuing to Porto Pi, appears the Can Barbarà marina at the in-land side. This marina it is separated to the sea by the traffic road that works as a kind of dyke and bridge, protecting the fingers and the boats inside the little inlet. It is an interesting zone due to its human scale thanks to conserve part of the standards of its original small size house construction built between 1838 and 1845 as the coastal border of El Terreno neighbourhood, which is just at the back side of this place. From this point, but at the sea side, continues the public space destined to the pedestrians use in the same way that before: as a narrow strip, but in this case, until arriving Porto Pi, with a fence at sea side that only disappears momentarily along the Maritime Station zone.

Leaving Can Barbarà and continuing to Porto Pi we find two more areas at both sides: Firstly, at in-land side, we find a zone influenced by the orography and the Mall Porto Pi besides a neighbourhood of mixed types of residences and buildings, that in its south border it is defined by a extremely poor public space and the presence of the motorway; and at north border, it is defined by another important via for traffic flow in Palma at second sea line (Joan Miró Av.) and by the presence of various commercial and hotel stores at ground floor. Secondly, at sea side, the even and spacious zone where the Maritime Stations (where the ferries and the cruisers berth) and a large parking area are located. Just leaving this point, following the pavement by the sea side to Porto Pi Navy Station and Sant Carles Castle is where we find the worst public space for pedestrians in all the whole studied area: Just a narrow corridor squeezed by the fence of the Port Authority and the crash barrier that "protect" the pedestrians of the motorway. At this point the traffic road became, again, as a high motorway that works as an entrance to Palma and a slip road to the south west of Majorca, connecting as well Palma with Cala Major neighbourhood and the Port facilities situated at Sant Carles Castle.

Finally, as a kind of disconnected zone of Palma typified by its orography and its isolation due to the motorway that works as a frontier (in a similar way that Cala Major suffers), we meet the Sant Carles Castle and the port facilities situated al the West dyke.Thanks to its isolation it is a place where the presence of green zones (nature in the military facilities), and its proximity to the sea, offers to visitors a calm zone to go for a walk, fish quietly, practise running or simply enjoy the sea sight. The presence of a small technical school for nautical studies (poorly maintained), its parking zone, bus stop and port entrance for vehicles provides its traffic flow, no way comparable in density to the waterfront one. At the sea side of the west dyke we meet a very simple, not very wide and crude promenade, not very visited, that invite the visitor to enjoy its sea sights in a relaxing way. This place takes the visitor until a kind of cul-de-sac, where the promenade ends due to the prohibition to enter to the port facilities. Is in this place where the visitor is closest to the sea in the whole promenade, only protected by the riprap and a transition zone that provides a safety distance.

<u>Other considerations: Natural and urban Palma-sea connections, actors, economy, natural environment, public transport, city council-port authority borders and ground floor patterns.</u>

The city and their waterfront are non well connected neither by traffic road nor for pedestrians due to, from the Jonquet neighbourhood until Porto Pi, the presence of a big wall of high density buildings at first sea line and its orography. It is important to point in this case the presence of buried dry creek beds that works as natural corridors that connect, in a natural way, the high lands of the hills around Palma and its urban coastal zone (for instance: Bellver), invaded by numerous constructions alongside its beds and at its mouth. Palma is better connected in a transversal way following the course of the ancient walls around the city than from city-to-sea direction. The capillarity net of traffic roads at Palma it is non well resolved at waterfront-city strip impeding the correct and balanced mobility flow between Palma and the promenade, especially at its central and west zone.

The actors that participate at the waterfront urban scene, achieving different roles attending their functions with different needs demanding different uses at public space are, fundamentally, these: Enterprises (from self-employees to family business and multinational companies), workers (from blue collar to white collar), visitors, inhabitants (both with different range of age, motivations and personal context –for example: a young single man/woman that visit or live there or a senior married couple-) and drivers (from transportation workers to inhabitants or visitors). Each collective contains different groups that demand a different needing, but the relationship between them, and between them and the urban scene, could be described in a simplified way: As much enterprises as much drivers demands easiness to move by vehicle and parking to get their tasks: delivery people/products to destinations rapidly and at any time. This is the predominant use at promenade thanks to the presence of traffic infrastructures built and planned in the past years. These needs annoy pedestrians visitors and inhabitants, which can not enjoy and move easily along the promenade because of the presence of wide motorways and parking areas which narrow the available pedestrian's public space, and furthermore, works as a barrier between the sea side and the city. The workers are affected to access/leave their workplaces by the traffic at rush hours.

The predominant economy sector present at the promenade it is related to tourism activities as hotels, touristic apartments, restaurants, pubs, night leisure venues, little supermarkets and nautical services. Most of them require a massive presence of customers that are "invited" to use their cars to get these places. This situation creates a non desired effect: It produces difficulties to get the family business hotel stores by the pedestrians (that depends, even more than the big companies, of their customer attraction ability), so these businesses are loosing a potential group of customers due to the present urban design.

The natural environment at promenade it is determined by the presence of the sea and testimonial green zones with trees, grass and some flower beds. The sea mass, so close to the city, affects directly to the urban climatic conditions, making a more stable and template temperature during the different seasons. By the other hand, the sea mass affects directly, as well, to the urban infrastructure, buildings and architectural conservation. One of the most visible example of this point is the Congress Palace's conditions of conservation meanwhile the building was stopped. The temperature, humidity, wind and sunlight set of rules makes the promenade a comfortable place for people, even more if it is mixed with the protection of the few trees placed there.

The public transport system at promenade is reduced to a four bus lines that offers to visitors and inhabitants a regular connection between the promenade and others points of Palma but not very efficient, as its use demonstrate. About the coexistence and overlapping of city and Port Authority urban territories at the

waterfront, it is necessary to point that is a question, most of the times, unknown by the citizenship and visitors due to the non well defined spaces along the strip.

The inexistent architectural and urban attraction at the promenade (except at the ancient city sector and Can Barbarà) it is caused by the poor design of the facades' ground floors. It is a design based in the devoid of details and the use of cold materials that produces hard borders (using the Gehl's nomenclature). This factor, together with the presence of the high density, noisy and contaminating motorway provokes to pedestrians a feeling of disaffection and, consequently, the impossibility to enjoy the public space at the waterfront build row.

Conclusion: What is wrong and what it is necessary to do. Justification of the proposed project

There are three different zones at the promenade with no connections between them (from in-land zone to sea side): The prominent build row, the wide motorway and the narrow coastal zone where it is supposed the pedestrians meet the sea. This last point it is important, because it is necessary to note that along the promenade the pedestrians can not meet the sea, except limited places. The pedestrians, the most of the times, intuit that the sea is close to them, but, in fact, impossible to reach it.

Having in mind this description, it is an evidence that the city of Palma, and even more the promenade, suffer a problem of hypertrophy of the traffic infrastructure that impede the pedestrians to carry out their new demands of use for pleasure and leisure at public space. The massive use of vehicles is incompatible with these needing: zones where to carry out in a quiet, clean, safety and attractive places relaxing activities, as well go for a walk, meet people or being alone, enjoy the sea sights, remain seated observing the surroundings, enjoy a meal or a drink in a pub or restaurant, practise sports, like running, cycling, skating, nordic walking, out doors gymnastics and nautical sports.

IV. (RE)DESIGNING THE FUTURE: SEAMBIOSIS. Objectives, justification and strategies

The objective of our proposal is (re)design the urban scene transforming, with the lowest cost, the present public space at the whole promenade to provide the visitors and inhabitants the possibility to carry out all the activities mentioned previously using the public transport or the comfortable routes designed for pedestrians from any point of the city without the necessity of use the private vehicle to reach these places; reconfiguring the city-to-promenade traffic and on foot connections and the public space, at the waterfront, converting the public transport and the pedestrian as the main protagonists instead the private vehicle in this new public space. Because of the important intervention we practise about, we enlarge the zone to performance (widen at east side up to the West Dyke and at west side up to Es Molinar neighbourhood) as an opportunity to increase the zone involved in order to provide more ambitious solutions of connectivity carrying out the planned strategies, mostly in the strategies S1 Coastal Axis and S2 Inland connections.

The urban problems described in Palma and at the promenade are the basis that justifies our proposal. To reach this objective it is necessary to develop different strategies to resolve the problems described in the waterfront. These strategies are:

S1.-Costal axis: Parallel to sea and transversal connection between the opposites points of the promenade offering along it a pattern based in the reduction of the traffic flow slimming the vehicles and parking platform positioning it as much close as possible to the build row and the installation of a tramway line alongside the promenade to make easier and sustainable the people mobility. This tramway platform will work as a soft protection between the traffic flow and pedestrian area. Finally, the expansion and new creation of public space at sea side for pedestrians to offer the necessary space where to carry out the new demands of leisure use that this collective is demanding with the proper conditions. With this strategy we resolve the problem of disrupted space that the pedestrians suffer along the promenade and impede them to enjoy it in a safety, healthy and calm way. This strategy it is related to the optimal mobility of users by vehicles (private transport and public transport) and on foot.

S2.-Inland connections: This strategy consist in act at the most of the existing torrents overlapped in the urban scene, recovering them through an upgrading of these natural and urban spaces, together with the elimination and reconfiguration of the existing urban barriers between the sea side and the city at the waterfront strip, making new inland connections in a easier and logical way giving prominence to green and comfortable areas in the urban scene, expanding them and reordering the road network granting power to the pedestrians. With this strategy we resolve the Palma's lack and deficient on foot and traffic connections between the waterfront, the city and its surroundings (El Terreno neighbourhood, Bellver forest, Son Armadans neighbourhood, Son Dureta neighbourhood, Bonanova neighbourhood and Nou Llevant neighbourhood), especially at its central and west section. This strategy is related to the optimal mobility of users by vehicles (private transport and public transport) and their mobility on foot as well. It is particularly relevant because it provides the necessary spaces of convergence from many different points of the inner city (the most of the neighbourhoods) with the waterfront, making possible the connection between this, at present, disconnected areas.

S3.-Erasing boundaries: It is clear that at the waterfront there is no connections between the backdrop build row and the sea side due to the existing coastal wide motorway. Furthermore, even at the sea side, there is a non well resolved and non well designed meeting zone between the city dominion and the port authority dominion. This situation produces an underutilised area in the present slim strip sea side, which leads to a decreasing and impoverish public space for pedestrians leisure use. Our strategy to solve this situation is to expand and unify both current dominion zones and create other news areas at the waterfront, making a unique wide and comfortable platform for pedestrians where they could carry out their new demanding uses and making easier the connection between the opposite faces (backdrop build row and sea side) along the waterfront giving priority to pedestrians. This strategy is related to the optimal mobility of users on foot.

These strategies are composed by different actions of relocation, demolition, creation, improvement, extension, reduction, construction, connection, recovery, elimination and link of spaces, facilities, urban infrastructures and buildings along different waterfront areas to transform and improve the existing public spaces resolving the urban problems in the promenade achieving the objectives mentioned before.

Description of the most remarkable strategy actions proposed along the promenade

Along the West dyke, Sant Carles Castle and Porti Pi (including the Maritime Station area) zone the most of the strategies carried out to solve the present problems located in these zones are those related to S1 Costal axis and S3 Erasing boundaries with actions directed to the creation of news spaces for pedestrians' leisure, as well the extension of the sea side promenade, a new beach and a pine tree park, among others. In these zones the mobility through private and public transport vehicle it is defined by the rearrangement and reduction of the parking areas, traffic lanes and the presence of the tramway platform that, working together, produce two beneficial effects to pedestrians: More public space available for pedestrians' leisure and a cushion space that protect the pedestrians from vehicles along the whole promenade.

Between Can Barbarà and Es Jonquet neighbourhood the most of the strategies carried out to solve the problems located along these zones are those related to S2 Inland connections and S3 Erasing boundaries, principally to solve the lack of connections between the inner city neighbourhoods and the waterfront, due to the existing difficult orography and the huge, wide and continuous build row at the first sea line in the waterfront. The actions to get this strategy are those related to the recovering of the green spaces alongside the natural torrents, which courses pass from the hills around Palma and its mouths arrives to the waterfront. These spaces works as urban and natural connections for pedestrians, forcing at the urban scene, a calm traffic flow. It is the case of the "Es Mal Pas" torrent , Can Barbarà and the Quarentena Park with with Bellver forest, the "Sant Magí" torrent with Son Rapinya. Other relevant actions are those associated to the improvement of many existing street sections and the creation of new public spaces for pedestrians through unique platforms enlarging the pavement, promoting the green zones and the creation of clam traffic areas in there that define the actions to carry out at Francesc Rosselló Plaza, Camilo José St and Es Pont Plaza. At the sea side, the most relevant actions proposed are those that have to do with the relocation and elimination of buildings and parking areas to transform the existing space into a more friendly space for pedestrians and users, being the Auditorium esplanade and the Sa Costa de S'Aigo Dolça the places where these new public spaces are relevant. In this case we underline the actions proposed for Es Jonquet neighbourhood area at its sea side where the key action is to eliminate the presence of traffic flow to permit the connection for pedestrians between the upper side (housing space) and the down side (the current square: leisure space) and make possible a true and comfortable public space instead the present one.

The Palma City Core, as we denominate the zone between Sa Riera mouth and the sea facade of Almudaina-Cathedral (including all the nautical and Port Authority facilities at shore), requires a special mention regarding to its complexity, symbolic burden, social use, architectural and urban design. The proposed strategies to carry out in order to resolve the problems described in this area are the three strategies (S1 Costal axis, S2 Inland connections and S3 Erasing boundaries) working together reinforcing each other at the same time. This zone needs a global approach, so the actions to develop in this area consist in the creations of a 175000 square meters Forum. This Forum represents the core of the City of Palma, the place where its heritage, present and future as a society will be reflected. So, the actions to carry out in this place must be leaden to the creation of the most powerful public space. To get this objective we propose to release from the traffic flow all this area, reducing the number of traffic lanes and eliminating the parking zones to create an unique platform from "Sa Riera" to "Es Born", where the presence of people gather together to a human scale urban scene, create an atmosphere of self representation and interaction between the people and the character of its symbolic architectural scenario as a place of people empowerment and a representation of the political and historical relationships in the city, remembering the urban-and-social function of the public space in the ancient Latin Forum and Medieval Plaza.

In this area, continuing to its sea side, we propose a link action in the present nautical and Port Authority facilities connecting both separate sides of Port Authority platforms at its closest point of proximity, in the entrance of the inner harbour, thanks to the build of a retractable bridge. To transform all this area in a new public space renewed with vitality thanks to the presence of pedestrians, we relocate the current nautical services warehouse to a most industrial place in the Port and the creation of commercial and leisure stores where the fishery facility it is located. With this action we make a new and inspiring route for pedestrians, unknown for people nowadays, approaching in addition, at its highest point, the sea and the visitors, which can move freely on foot around there in a comfortable and stimulating public space.

All this actions carried out in the Palma City Core are proposed to make this area as the most relevant zone of public space to transmit the new values and relationship between people and the urban scene, where the pedestrian and the natural (sea and green zones) and build environment (human scale architecture) find its ancient and symbolic relationship in this place.

Between the "Parc de la Mar" and "Congress Palace" sea side strip, the most of the strategies carried out to solve the problems located along this zone are those related to S3 Erasing boundaries, principally to solve the problems of connection between the backdrop build row and its sea side, creating new spaces where the pedestrians can enjoy their stay accomplishing their demands of new uses in a zone where the presence of vehicles is reduced to the maximum due to the presence of an unique platform. This unique platform is the key to discourage the use of the private vehicle, forcing to reduce its speed, its presence and giving priority to the pedestrians along this area and at the greater part of the whole waterfront. In addition this unique platform works as a surface connection between the build row and the sea side along certain zones in the promenade, resolving the rupture created by the presence of the wide motorway.

These actions are performed creating a new beach connected to the "Parc de la Mar" through a square integrated in the unique platform, just like the connection of the "Gesa Park" with the promenade and the creation of a new plaza in front of the "Congress Palace" connected by the unique platform.

Finally, between "Congress Palace" and the east motorway entrance to Palma (close to "Es Molinar" neighbourhood) the most remarkable strategies accomplished are those related to S1 Costal axis and S2 Inland connections to solve the problems of connection between the this waterfront area with the rest of the promenade at west, the inner city trough the Nou Llevant neighbourhood at the north side, the "Es Molinar" neighbourhood at sea side and the east of Majorca (including the Airport) by motorway. The main actions proposed are the creation of a new traffic configuration that regulate and organize the traffic flow in its east traffic entrance to Palma, performing one of the most important proposal in this project: the reduction of the traffic flow and the presence of private vehicles along the waterfront to release public space in order to create new zones for the pedestrians' new demands of space use in the waterfront.

So, in order to get this aim we design new mechanisms that reinforce this idea, as well the creation of a green boulevard following the coast, the extension of the transversal street form city to "Es Molinar" neighbourhood and a new roundabout at the east border of the city that works as a traffic flow regulator making easier the deviation of the private vehicles to Palma avoiding its presence along the promenade.

Finally, we must point a very important environmental achievement thanks to our proposal of reducing the presence of private vehicles in the waterfront. Due to the use of the tram along the promenade at least 10000 private vehicles will not figure at this space per year. Considering that each car consumes 834 litres of fuel per year, which means a contaminating emission of Carbon Dioxide to the atmosphere of 2083 kg per year/car. So, having in mind 10000 cars that is equivalent to 20.833.333 kg of less emission of Carbon Dioxide per year in total. Thanks to this action we improve the urban environment of Palma and the health of the population in Palma.

V. FINAL CONCLUSION. The Result: Seambiosis

These strategies, as well, will permit to create a new urban scene based in a sustainable and environmental mobility, stretching on the time of remain of the pedestrians in a healthy and comfortable public space for pedestrians thanks to a creation of a human scale new urban and architectural spaces, promoting the presence

of soft borders at ground floor instead the hard ones, where visitors and inhabitants will perform their demands of use in the public space for pedestrians in the waterfront as walking, practise sports, seating and consuming in the hotel stores promoting and enforcing the benefits of a private-public joint investment to transform the waterfront into a new place where the slow city model permits a better social-urban-and-environmental interaction. In the end: make possible, again, the lost seambiosis.

VI. BUDGET JUSTIFICATION AND ECONOMIC VIABILITY OF THE PROJECT

One of the most relevant initiative of the project is to promote de public-private joint investment involving the private sector to co-finance this performance of public work project. This is a fundamental step in order to get a strong alliance between public and private initiatives. This alliance must be based in the win-win investment game, particularly important for a private company. Considering the high number of family hotel business present at the waterfront, which capacity of investment it is not very strong and, at the same time, extremely dependent of the capacity of expense of the visitors, our project is a very investment because we create, along the waterfront, an excellent public space that attract to the visitors and inhabitants just in the places where these business are located. So, an increasing number of potential costumers, together with a longer period of stay in there, provoke an increase of opportunities of attraction of these visitors to its business. In this case it is proved that the private investment to improve the public space is a profitable investment. The key is to involve the most of the family business located there as possible because it will permit that each small investor will contribute less capital. At the same time, this investment makes the investors more involved in the care of their investment: the public space, and, indirectly, the care of the quality of the visitors' experience at the promenade.

The total time of the whole project execution it is estimated in 10 years. As a continuation of this Chapter, we present a drawing estimated public budget to carry out the project in terms of cost, incomes and savings along a time period of 30 and 50 years

COST

	Sub-total cost	Total cost
Clearing+Preparing Site	10.000.000,00 €	**10.000.000 €**
Construction		**85.440.000 €**
Civil work	62.400.000,00 €	
Roads	20.160.000,00 €	
Landscaping	2.880.000,00 €	
Tram		**340.800.000 €**
Platform construction	180.000.000,00 €	
Shed construction	30.000.000,00 €	
Purchase of tram	80.000.000,00 €	
Installation	50.800.000,00 €	
TOTAL COST		**436.240.000€**

INCOME STATEMENT

INVESTMENT OPTIONS	
1.-TRAM	
Ticket price (average)	1€
Predicted users/day	25000
Profit margin	0,80€
Time of concession	50 years
Total Income (1)	**365.000.000€**
2.-SURFACE PARKING	
Spaces	1000 units
Incomes (year/space)	2288€
Period of time	30 years
Total Income (2)	**68.640.000€**
3.-TERRACES	
Area	2000m2
Annual tax	127,82€/m2
Period of amortization	30 years
Total Income (3)	7669200€
TOTAL INCOMES (1)+(2)+(3)	**441.309.200€**

CITIZEN SAVINGS

Besides of the less emissions of Carbon Dioxide, our project represents an important saving in the cost of acquisition and maintenance of a private vehicle, principally a standard car.

Keeping in mind that the population who lives in the whole studied area ascend to 60000 inhabitants and the ratio person/car in Palma is 0,64 cars/person, that means 38400 cars in this area. Because of our project remove a third part of traffic lanes along the promenade, consequently 12800 cars will not be present in this area. Considering a figure of 10000 cars instead 12800, our project represent and important citizen saving looking at this estimations:

A) (10000 cars) x (3 cars/person/50 years) x (10000€ acquisition/car) = **300.000.000€**
B) (10000 cars) x (1000€ average fuel cost/year/car) x (50 years) = **500.000.000€**
C) (10000 cars) x (1000€ average insurance and maintenance/car/year) x (50 years) = **500.000.000€**

TOTAL CITIZEN SAVING IN PRIVATE VEHICLE -50 years-: (A)+(B)+(C) = **1.300.000.000€**

Conclusion:

Having in mind these figures, our project is clearly profitable for every reason: Environmental, economic and social, both for the public and private initiative.

Palma (ES)

SEAMBIOSIS

STRATEGY 2
RECOVERY OF ST. MAGI TORRENT AS A PUBLIC AXIS, CONNECTING THE SEAFRONT WITH SOFRAPVER AND TRAMUNTANA SQUARE. CREATION OF PEDESTRIAN PLATFORM WITH CALMED TRAFFIC. LIPROPRIATION OF PRIVATE BACKYARDS AND RUN-DOWN BUILDINGS, CALMING TRAFFIC.

STRATEGY 3
ELIMINATION OF THE ESLIRI AND BORJOS ROAD, LINING BOTH SIDES OF THE PLAZA, IMPROVING THE CONNECTION BETWEEN THE SQUARE AND ES JONQUET NEIGHBOURHOOD.

STRATEGY 2
CREATION OF A TRUE PLAZA, PONT VIA EXTENDING THE SIDEWALKS.

PARKING MARQUÉS DE LA CORONA
TOTAL 534 existing places
(268 underground parking places)

STRATEGY 2
CONNECTION OF THE SEVERAL SIDEWALKS THROUGH PEDESTRIANS PLATFORMS WITH CALMED TRAFFIC, IMPROVING THE CONNECTION FOR PEDESTRIANS BETWEEN THE SEASIDE AND HIS AROUND.

ES JONQUET

S08

SA RIERA

S07

STRATEGIES 2 + 3
CONNECTION OF ST. MAGI TORRENT AXIS WITH THE SEASIDE PROMENADE, THROUGH A PLATFORM SHARED BY CALMED TRAFFIC AND PEDESTRIANS, GIVING PRIORITY TO PEDESTRIANS. EXTENSION OF THE PROMENADE TOWARDS THE SEA, THROUGH CREATING A BOAT STORAGE FACILITY FOR THE PORT.

REFERENCE PICTURE
TRADITIONAL BOAT STORAGE FACILITIES IN PORTO COLOM

AUDITORI

S06

STRATEGIES 1 + 2 + 3
LINK THE ANCIENT SA RIERA MOUTH WITH THE NEW ONE IN THE SEA INSIDE, BUILDING A RETACTIL BRIDGE, CONVERSION OF THE CURRENT PORT FISHER FACILITY INTO COMERCIAL STORES. RELOCATE THE NAUTICAL WHAREHOUSE INSIDE THE PORT FACILITIES.

STRATEGY 2
CONNECTION OF THE SEASIDE PROMENADE WITH THE BELLVER FOREST, VIA THE CREATION OF NEW SEVERAL PUBLIC SPACES; NEW PLAN FOR FRANCESC FOSSELLÓ PLAZA; FACILITATE THE ACCESS TO THE EXISTING INNER BLOCKYARD

STRATEGY 3
ELIMINATION OF THE CURRENT PARKING AREA, TRANSFORMING IT IN A TRUE PLAZA. RELOCATION OF THE TWO EXISTING BUILDINGS, FACILITATING THE CONNECTION BETWEEN THE AUDITORI AND ITS PLAZA. CREATION OF A PLATFORM FOR PEDESTRIANS AND VEHICLES, WITH A MAXIMUM SPEED OF 30 km/h

STRATEGIES 1 + 3
CREATION OF A BIG SQUARE ON THE CITY SIDE, RELOCATING THE MAIN TRAFFIC TOWARDS THE SEASIDE, AND CREATING A CALMED TRAFFIC SERVICE LANE NEXT TO THE BACKDROP BUILDINGS

S05

STRATEGY 2
CONNECTION OF THE SEASIDE PROMENADE AND THE BELLVER FOREST, VIA QUARENTENA PARK, TRANSFORMING THE SEVERAL CURRENT SPACES INTO PEDESTRIAN AND GREEN AREAS SHARED WITH CALMED TRAFFIC

BELLVER

STRATEGIES 2 + 3
CONNECTION OF QUARENTENA PARK WITH THE SEASIDE, THROUGH A PLATFORM SHARED BY VEHICLES AND PEDESTRIANS, REDUCING THE TRAFFIC SPEED DOWN TO 30 km/h, AND GIVING PRIORITY TO PEDESTRIANS

PARKING JAIME MIRO (P)
TOTAL 435 (underground parking places)

Tramway
1 Lane
2 Lanes
2 Lanes + 1 dedicated lane
3 Lanes

STRATEGY 1_COASTAL AXIS

STRATEGY 1
REDUCTION OF THE NUMBER OF TRAFFIC LANES, FROM THE 8 EXISTING ONES (INCLUDING PARKING) TO 4 LANES WITHOUT PARKING

CA'N BARBARA

STRATEGY 2
DEMOLITION OF THE ALONGSIDE EXISTING BUILDINGS, RECOVERING ES MIG, PAST TORRENT AS A NATURAL AND URBAN CONNECTION BETWEEN CAN BARBARA PAST AND BELLVER FOREST

S04

PARKING ESTACIÓ MARÍTIMA
EXISTING 70 places
AFTER INTERVENTION 200 places

STRATEGY 1
NEW ROUNDABOUT AS THE MAIN WEST TRAFFIC COASTAL ENTRANCE TO MAJORCA CITY

STRATEGY 1
TWO LANES ONEWAY STREET LEAVING PALMA, PLUS TWO LATERAL PARKING LANES, WIDENING OF BOTH SIDEWALKS, PLANTING PLATANUS

ESTACIÓ MARÍTIMA

TO CALA MAJOR

S03

STRATEGIES 2 + 3
DEMOLITION OF THE EXISTING BRIDGE. ELIMINATION OF THE MOST OF THE PRESENT PARKING SPACES. CONSTRUCTION OF A 440 PLACES NEW PARKING BUILDING. RELOCATION OF THE NAUTICAL STUDIES SCHOOL. CREATION OF A NEW GREEN AND LEISURE PARK, CONNECTING WITH THE GREEN AREAS IN PORTO PI NEIGHBOURHOOD.

STRATEGIES 1 + 3
OVERVIEW OF MAJORCA CITY SEASIDE FAÇADE

STRATEGIES 1 + 2 + 3
IMPROVEMENT OF THE PEDESTRIAN CONNECTION BETWEEN PALMA AND CALA MAJOR, USING THE TRAMWAY AS A CUSHION SPACE TO PROTECT PEDESTRIANS

PORTO PI

STRATEGY 1
TWO LANES ONEWAY STREET TO CITY CENTRE, EXTENSION OF BOTH SIDEWALKS, EXTENDING THE SEASIDE PROMENADE TOWARDS CALA MAJOR AND ST.CARLES WHARF, USING THE TRAMWAY AS A CUSHION SPACE TO PROTECT PEDESTRIANS

STRATEGIES 1 + 3
EXTENSION OF THE SEASIDE PROMETADE FOR 800 m. ONLY FOR PEDESTRIANS

REFERENCE PICTURE
EL FORUM ARTIFICIAL BEACH IN BARCELONA

STRATEGIES 1 + 3
CREATION OF A 600 m LONG ARTIFICIAL BEACH ON THE OUTER SIDE OF THE ST. CARLES WHARF

S01

STRATEGY 3
DEMOLITION OF THE NAUTICAL STUDIES SCHOOL BUILDING. CREATION OF A PINE TREES PARK BELOW THE ST. CARLES CASTLE. SET OF A TRAMWAY STATION

PARKING ESCOLA NAÚTICA-PESQUERA
EXISTING 77 places
AFTER THE INTERVENTION 100 places

S02

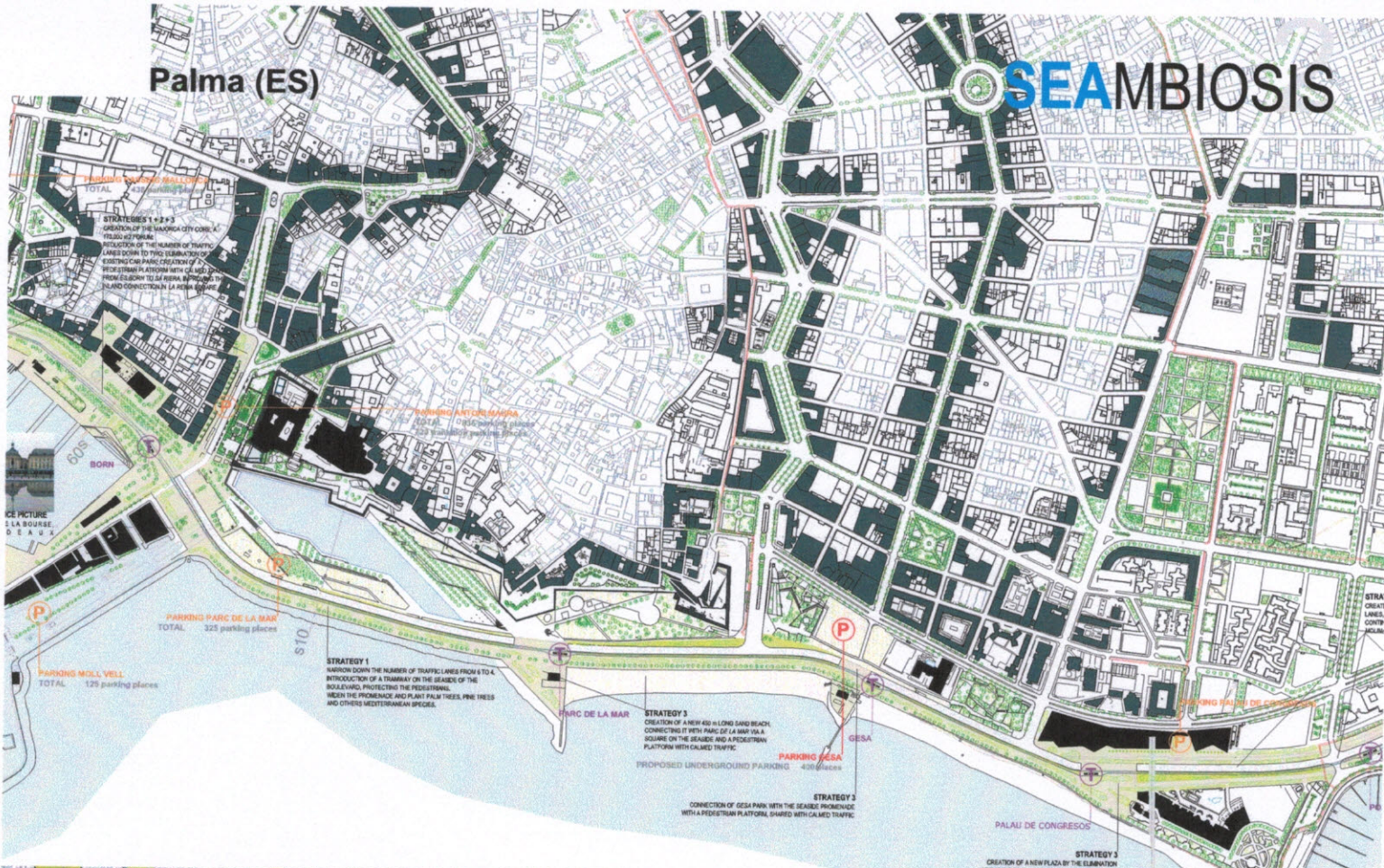
CASTELL DE ST. CARLES

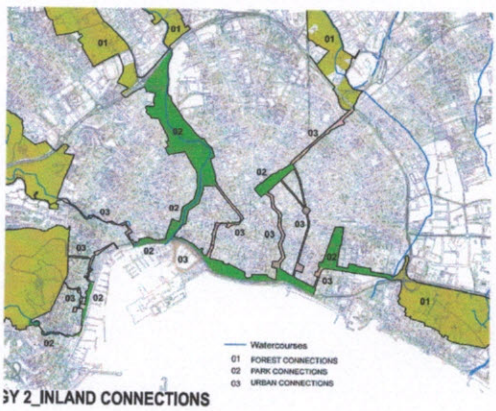
PROTAGONIST BUILDINGS		(P)	EXISTING CAR PARK
BACKDROP BUILDINGS		(P)	NEW CAR PARK
NEW OR RELOCATED BUILDINGS		(T)	TRAMWAY STATION

GENERAL PLAN
1 : 4.000

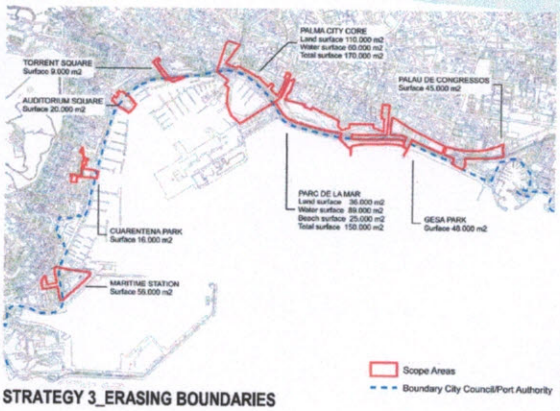
Palma (ES)

SEAMBIOSIS

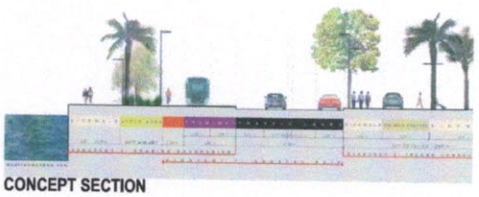




GY 2_INLAND CONNECTIONS

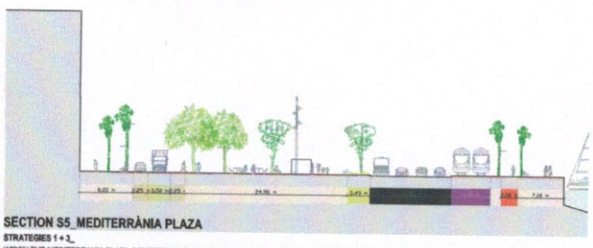


STRATEGY 3_ERASING BOUNDARIES

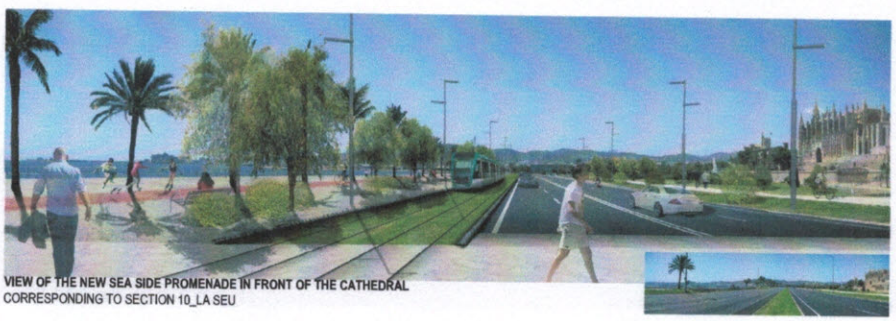


CONCEPT SECTION

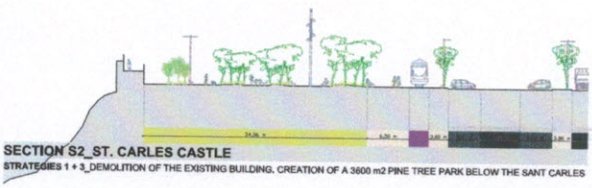
VIEW OF THE NEW MAJORCA CITY CORE, A 175.000 m2 FORUM
CORRESPONDING TO SECTION S9_SA LLOTJA



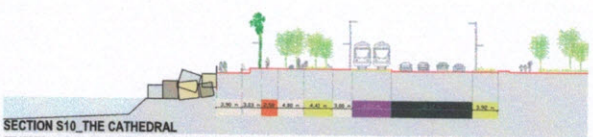
SECTION S5_MEDITERRÀNIA PLAZA
STRATEGIES 1 + 3_
WIDEN THE MEDITERRANIA PLAZA,COMMERCIAL EXPLOTATION OF THE SPACE WITH HOTEL AND RESTAURANT TERRACES,KIOSKS AND EPHIMERAL FACILITIES



VIEW OF THE NEW SEA SIDE PROMENADE IN FRONT OF THE CATHEDRAL
CORRESPONDING TO SECTION 10_LA SEU



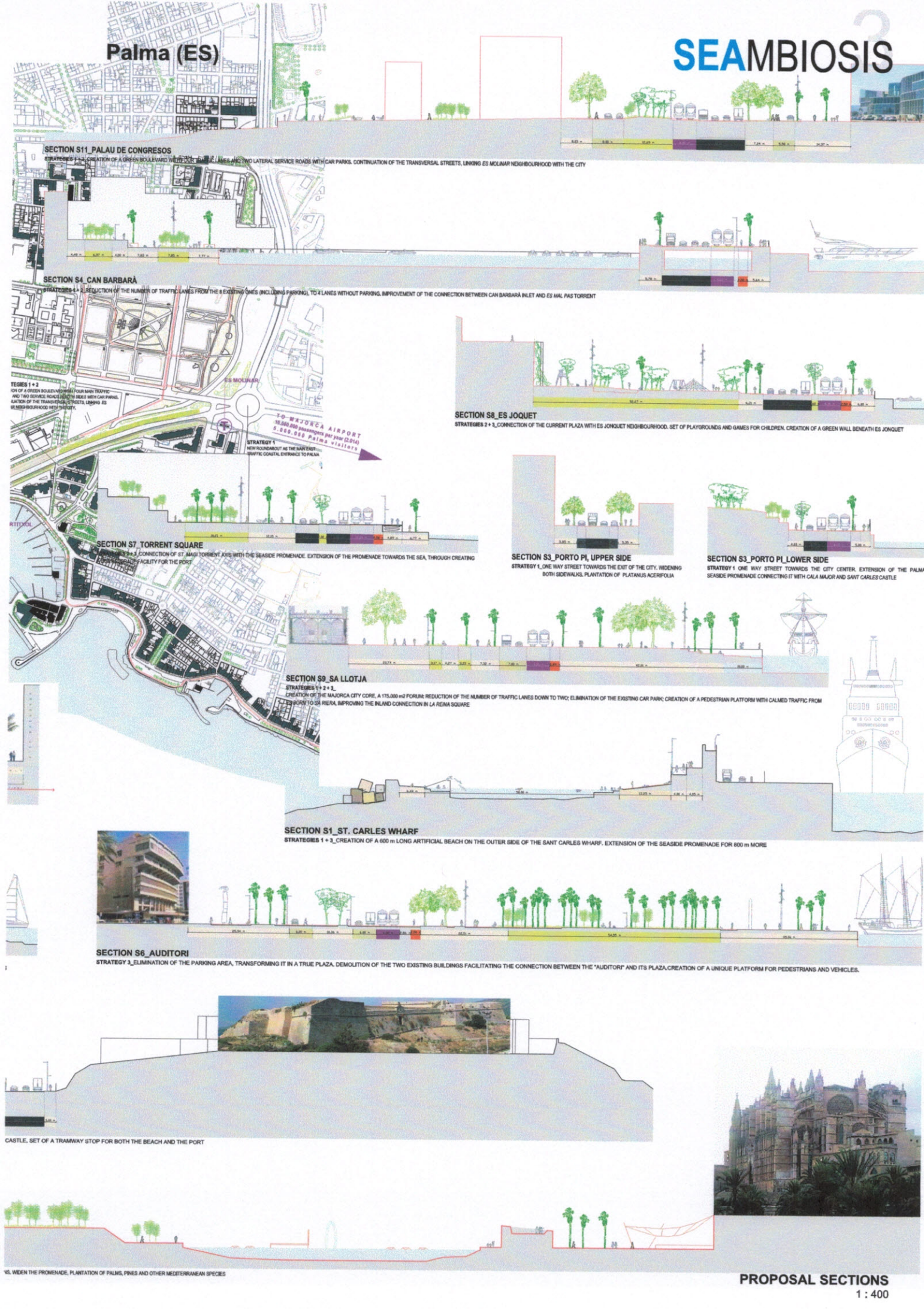
SECTION S2_ST. CARLES CASTLE
STRATEGIES 1 + 3_DEMOLITION OF THE EXISTING BUILDING. CREATION OF A 3600 m2 PINE TREE PARK BELOW THE SANT CARLES



SECTION S10_THE CATHEDRAL
STRATEGY 1_NARROW DOWN THE NUMBER OF TRAFFIC LANES FROM 6 TO 4, INTRODUCTION OF A TRAMWAY ON THE SEASIDE, PROTECTING THE PEDESTRIAN

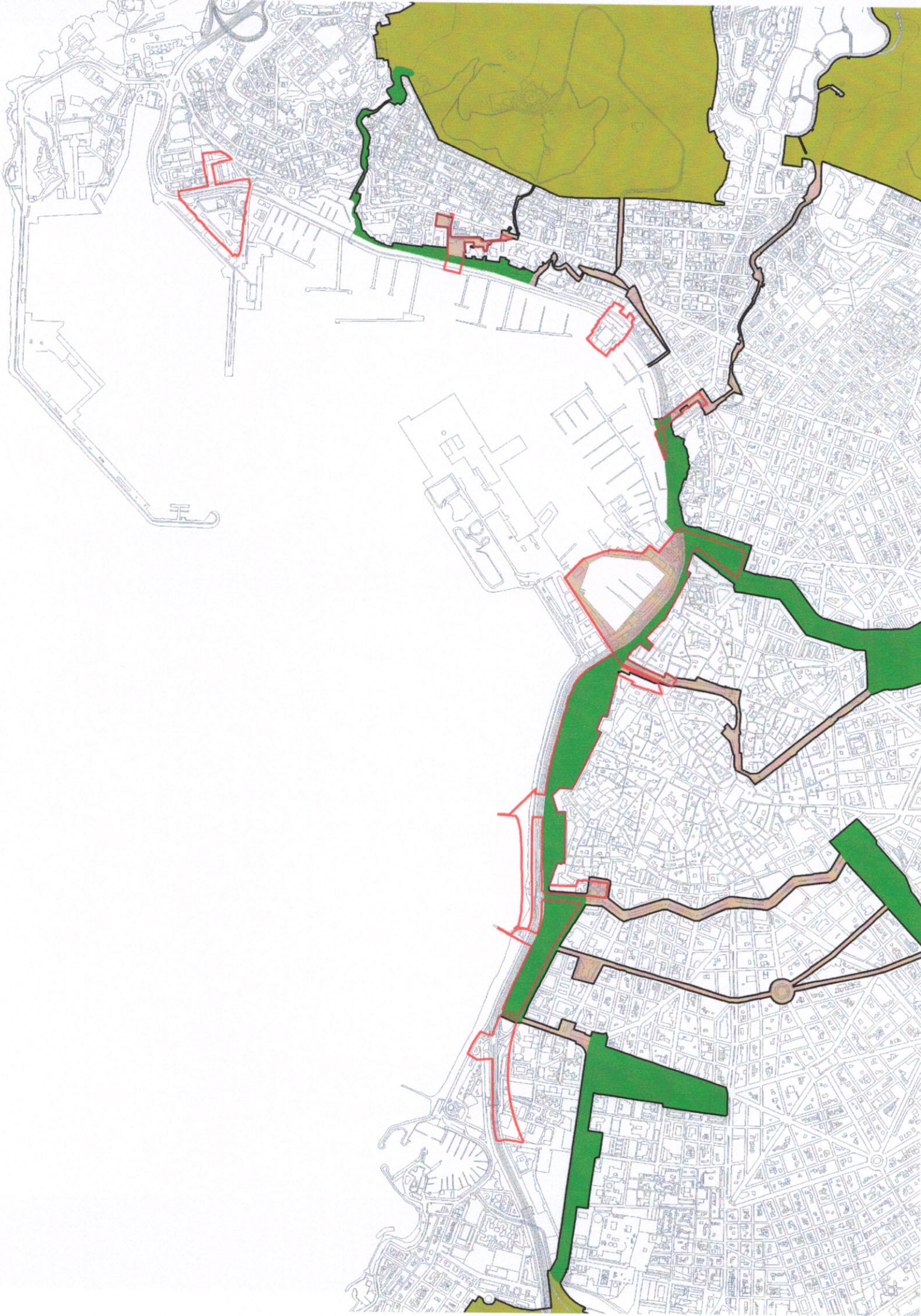
Palma (ES)

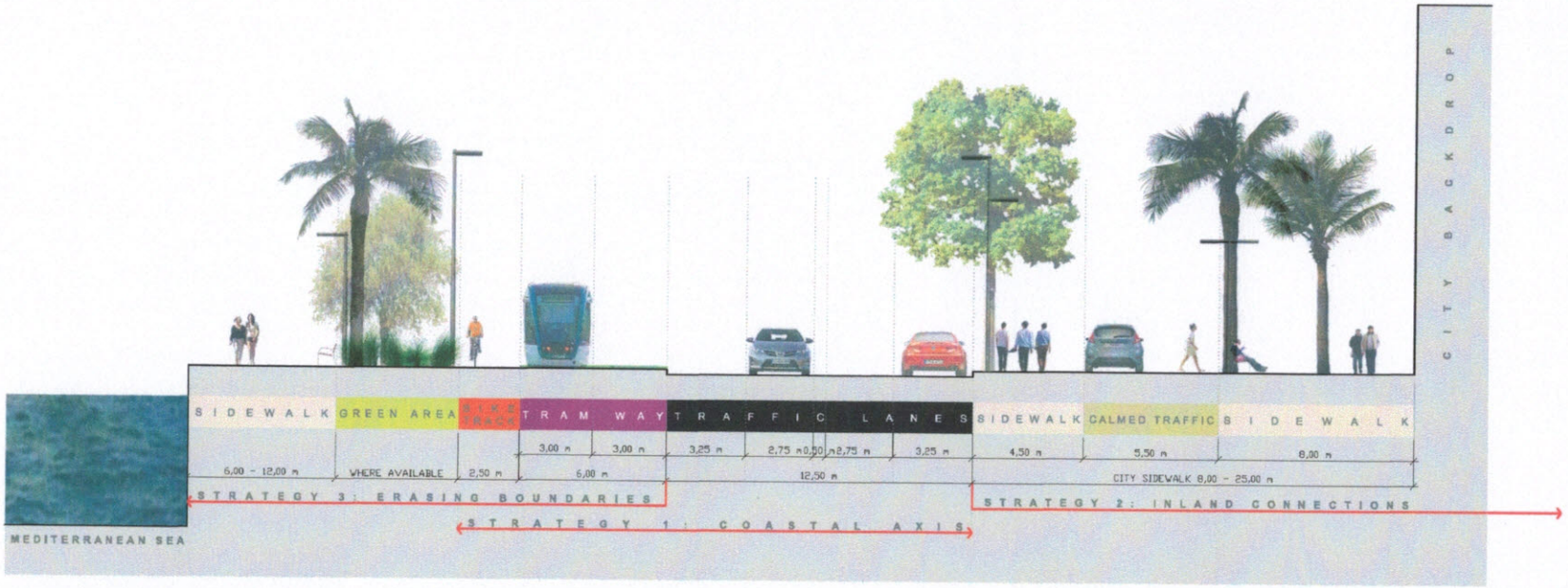
SEAMBIOSIS



PROPOSAL SECTIONS

1 : 400





CONCEPT SECTION