THE 24-HOUR METROPOLIS

“mixed-use” intervention in building a thrive neighborhood

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ESTAB-UPC

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ABSTRACT

“24-hour city” concept in the urban development project in building a mixed-use central spine in Barcelona. Besós River has long been considered as a border to the Barcelona Metropolitan, and the whole city has been broken into two parts. There exists a gap caused by unbalanced developments in terms of economic, social, culture..etc. Barcelona metropolitan has payed abundant attention to encourage connectivity, exchange and mix uses in order to have a thrive environment and build 24-hour city. On the contrary, across the river, as an immigration town, the poverty is the main image when we talk about the other side of river.

The thesis is concretized the hypotheses through the analysis on the main principles of urban development in Favela-Bairro Program1 by Jorge Mario Jáuregui and his team’s work in Rio de Janerio, Brazil, City of Melbourne’s Policy for the 24 Hour City2, Central Park in New York and concerning on the social context and actual condition in Barcelona, the new principles for the action are proposed, which mainly focus on multifunction, accessibility, connectivity, new centrality in giving the new definition to Besós River Park as a central spine in metropolitan. In the current condition, we try to use the Besós River Park link Santa Coloma de Gramanet with Barcelona City, and aside from the existing bridges, several pedestrian bridges are proposed to knit together the two sides along the river, as if they were string knitting two different urban fabrics, besides, a large scale urban project, must go further to the existing physical soundings and demands of citizens, we take the opportunity to think over the using and abandoned industrial area along the Besós River and give them a chance to transform into a mixed-use sequence till the mouth to the Mediterranean Sea in order to have different sorts of activities in a city so that the neighborhood aside and the whole citizens will benefit from its thrive atmosphere, and post-industrial intervention and artificial typography will be manipulated to the relevant area along the sequence. Thinking of changing the image of the area, a new network of iconic landmarks will be set in these three strategic areas along the Besós River Park. The theory proposed in this thesis supports the project of students Iago C. Ko and his partner, which propose a mixed-use extension for the beer and chocolate drink factories in Gan Zam area, Santa Coloma de Gramanet. And as a starting point of the central spine, it will focus on transforming the industrial area into a urbanistic one.

2 city of Melbourne’ s policy for the 24 hour city-www. melbourne.vic.gov.au
The mixed-use, 24-hour central spine is a combination of residential, commercial, culture and recreation, which stimulates all citizens with distinct backgrounds to share different experiences from day to night. With its new features of multifunction and connectivity, Besós River Park is transforming from urban park to a central spine which is balancing the expectations of residents and visitors 24 hours a day, seven days a week in order to give a new centrality to this new central spine park in Barcelona. The improvement on environmental conditions contributes to have a thrive neighborhood along the new central spine park integrating the informal one into the whole metropolis.

**KEY WORDS**

*Mixed-use, Connectivity, Centrality, Besós River Park, Central Spine*
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INTRODUCTION

The 24-hour concept means a place that has a mix of uses for different people at different times, thus, a city meshes residential and commercial, public and private, cultural and recreational, programmed and unprogrammed, to encourage expectations and anticipation, and to incite us to share in the experiences that enhance our everyday lives both at day and night. Taking “mix-use” and “day and night” into consideration.

Besós River has long been considered as a border to divide metropolis Barcelona with Santa Coloma, Sant Adrià de Besós and Badarona. Distinct from the “24-hour” Barcelona, we could describe the other river bank as a “12-hour” Town, which contributes to the unbalanced development of the two sides. In terms of its own rhythms in Santa Coloma de Gramenet, it has a great potential to be a 24-hour community. The thesis concretized hypotheses with the analysis on City of Melbourne’s Policy for the 24 Hour City and Favela-Bairro Program. The frameworks for actions behind these two projects have far being Successful. In the case of Favela-Bairro Upgrading Program, it was aiming to
transform favela into neighborhoods of the city by improving their conditions and integrating them with the rest of the city, and it has become the largest program to implemented in Latin America for upgrading squatter settlements, meanwhile, the Melbourne’s Policy for the 24 Hour City helps ensure competing needs are balanced as the city moves from day through night and responses to city issue are integrated and coordinated. Similar from broken condition in Rio de Janerio, Brazil. There exists a division inside Barcelona Metropolis along Besós River Park.

*How to integrate the informal neighborhood to the rest of Barcelona? How to satisfy the citizens’s expectations according to different culture backgrounds in order to obtain an equilibrium in activities from day to night.*

Santa Coloma de Gramenet and Sant Adriá de Besós interior provide an informal organization that fragments space and time. Flexible organization allow for constant changes and time becomes a determinant dimension. The Besós River Park organizes itself as a sequence of imaginary “switches” that go on and off at different hours of the day. Here the concepts of mixed-use and spatial flexibility are taken to the extreme. Investment zone, and diverse plug-in activities and events are inserted into the strategic area.

*How to take use of the derelict land for plug-in activities along the river park for large-scale transformation of morphology in the area? How to transform the existing urban park to a central spine park?*

In the following chapters, these four questions are going to be found solutions with the development with a series of proposals in terms of resolving the topic of connectivity, multifunction, and centrality in order to support a new image of Cental Spine Park to Besós River Park.
CHAPTER I

1.1 The 24-hour City
1.1 The 24-hour City

A City for the 24 Hour City should be produced to support its own rhythms. The rhythm of Melbourne between 8am and 6pm is dominated by the hustle and bustle of commerce, people coming and going from nine to five jobs, people going to meetings, having lunch, attending university, and visiting tourist sites.

As people finish work, the city develops a more relaxed atmosphere, people meet for dinner, gather to see a show or visit a gallery. Around 11pm to midnight, the city’s vibe changes. Many visitors and workers have left the city, while others gather to celebrate and engage in live entertainment, drink at the bars or socialize in clubs. It is also recognised that the city is home to residents, many of whom need to sleep during this time, even while activity takes place. As the entertainment venues close and the city visitors go home, it is time for the city to rest and recuperate for the new day. Late-night shift workers finish their work, and the city cleaners enable the new day to commence afresh (See.B1).

The city of Melbourne recognizes the importance role it has to play in contributing to the 24 hour city, building on its successes but also responding to and addressing areas of concern. Over the past decade the city has attracted a diverse and vibrant mix of residents, visitors and business using the city 24 hours a day, seven days a week. Thanks to the initiatives such as State Government changes to the Liquor Control Reform Act 1998, which encouraged

B1 .Representation of Melbourne city rhythms-redraw redraw by Ma Li
development of the licensed industry; designation in 1999 of the Melbourne CBD as a 24 hour mixed use zone; the success of Postcode 3000 which transformed the city center into a residential destination; the planning framework encourages development of a vibrate mixed-use area. It is critical that the City of Melbourne recognizes the important role it has to play in contributing to the 24 hour city, building on its successes but also responding to and addressing areas of concern. The city of *Melbourne Municipal Strategic Statement* (MSS) clearly defines the area as a 24 Hour Zone. This planning framework encourages development of a vibrant mixed use area, with careful management to minimize negative impacts and recognition of the growing residential community within the central city. In other words, it is focused on balancing the needs of business and retailers with the expectations of residents and visitors in order to provide a framework to manage and resolve issue as Melbourne journey through the hours from day through night.

Encouraging people into the city at night will support economic prosperity and encourage business to develop and cater for customer needs. The city of Melbourne will work with stakeholders, including community members, to both facilitate and sustain the development of a friendly and attractive location that actively promotes a variety of activities, services and events. Recognizing that city residents in the 24 Hour Mixed Use Zone need local government support on key social and amenity issues, the city of Melbourne aims to create an environment that actively seeks participation of a diverse range of communities. This includes ensuring a range of youth and family friendly activations are promoted and provide and support the provision of accessible, responsive and appropriate services that meet the changing needs of residents, business, students and visitors to the city. It also includes encouraging events that are alcohol-free and events that are affordable and accessible.

“24-hour” city has a lot to do with commercial development. There are imperatives in terms of profit and property ownership. On one side of Besós River, Barcelona takes its urban design very seriously. Huge strides have been made to initiate different types of developments that encourage connectivity, exchange, and a mix uses, 24 hours a day. Distinct from the “24-hour” Barcelona, we could describe “Santa-Coloma” as a “12-hour” Town, and the main role that Besós river is a more like a border, which contributes to the unbalanced development of the two sides. In terms of its own rhythms in Santa. Coloma de Gramenent, it has a great potential to be a 24-hour community (See. B2).

On the other hand, recreational spaces in the city are product of commercial interests. Recreation encompasses a broad range of behaviors and activities from the more predetermined types, to the more spontaneous types. There are two ways that should be allowed to occur in cities, one is the control through a
set or rules that define a game, to the opposite, invention and freedom of play makes urban places more fascinating. Since multicultural background in Santa Coloma indicates more multifunctional requirements, “mixed-use” becomes the keyword in the process of designing a thrive community.

The 24-hour City means a place that has a mix of uses for different people at different times, thus, a city meshes residential and commercial, public and private, cultural and recreational, programmed and unprogrammed, to encourage expectations and anticipation, and to incite us to share in the experiences that enhance our everyday lives both at day and night. Taking “mix-use” and “day and night” into consideration, here are some priorities for actions:

1. **Activation and cultural context** -- activating a diverse range of areas and activities, supporting a diverse economy in the city, and working to facilitate the development of a safe, inclusive, and vibrant culture that respects competing needs and differences.

2. **Infrastructure and physical context** -- ensuring public space is managed effectively and appropriate infrastructure develops to support the 24 hour city.

3. **Partnership** -- working with all stakeholders, including service providers, traders and business, Federal, State and other local government; as well as local residents and communities, to ensure a holistic and consultative approach is taken to addressing the issues associated with the 24 hour city.

“24-hour” concept focuses on balancing the needs of business and retailers with the expectations of residents and visitors in order to provide an issue as variety.
journey through the hours from day through night, a mixed-use zone with expectations of business, residents, visitors also has the potential to build a new centrality. Here we take the benefits of Besòs River Park to be a mixed-use sequence. With the increasing population of residential population and numerous visitors to Barcelona city, Besòs River Park together with its dull atmosphere which has been preventing citizens and visitors to close to this existing urban park. A “24-hour” concept will direct the strategies in transforming the derelict land for mix-using along the river park for large-scale transformation of morphology in the area, which will balance the distinct demands during 24 hour per day among citizens and visitors. With more people finding their expectations along the river and willing to assist variety of activities around, the realization of flourish neighborhoods along Besòs River is not far to reach.
CHAPTER II

2.1 Broken City Metropolitan Park in Rio de Janeiro, Brazil

2.2 New Connectivity in Besós River Park

2.3 After 12 + Soft + Hard

2.4 New Sequence in Building a Multiuse spine
2.1 Broken City Metropolitan Park in Rio de Janerio, Brazil

Similar with the Besós River as a border dividing the metropolis into two parts, The same broken condition reveals in Rio de Janeiro, Brazil. Rio de Janeiro’s Favelas is located in one of the accesses to the city of Rio de Janeiro from the North side in the intersection of an expressway, main avenues, a river and a railway line. The Railway line performs as a barrier dividing the area in disconnected fragments(See.C1). Rio de Janeiro’s Favelas (shantytowns) house 20% of the city’s population. Approximately 1 million people in a city of 5.5 million, live in these unplanned communities that began to emerge over 100 years ago. Area comprises 1,400 hectares of territory with a nucleus of ten informal communities (favelas) with a population of 28,000 inhabitants (400 hectares).

The complex’s land use pattern combines industrial, educational and research institutions (the campus of the Federal University and the Fiocruz Research Institute) commercial areas and a portion of the port area of the city, all mixed with informal residential occupation. Jorge Mario Jáuregui and his team’s work in
Rio de Janeiro in urbanism and neatly proceeded to describe their three areas of interventions:

First, work in “formal city” neighborhoods (mostly designed areas following a grided street pattern, topographically flat, and predominantly middle class); Second, works in the “informal city” of shantytowns or favelas, as they are locally called (spontaneously grown urban zones, dizzyingly stepped and hilly, and over-ridingly poor); And third, his work with small-scale urban equipment: bus stops, city furniture, etc.

The opposition between the formal city and the informal city are unquestionable, we can see in Jáuregui’s work: the erasure of that opposition, the hybridization of the conflictive line or zone—of physical contact between the two city fabrics. The work aspires to create one Rio, integrated.

D1. Mater Plan for Favela-Bairro Program by Jorge Mario Jáuregui
1- Street Upgrade and reconfiguration  
2- Urban Park Implementation  
3- Implantation of aeration systems / fountains within the water remediation program  
4- Reconfiguration of the Fish men colony  
5- Bike path extension along the channel road  
6- Proposed new access to Rio de Janeiro’s Port  
7- Implantation of UPUs adjacent to the expressway  
8- Waters treatment  
9- Linkage Overpass construction  
10- Proposed Rail track configuration to allow new connections  
11- Relocation Housing Units with commercial and services  
12- Creation of new subway and bus stations  
13- Relocation Housing Units with commercial

According to the Master Plan above (See.D1), we can summarize the actions in the Favela-Bairro Program, connections in transportations are realized by creation of new rial track, new subway and bus station that open 24 hours (1 and 8) in order to guarantee the accessibility of each place and enhance its connections with the surroundings taking the areas from isolation. Proposed new access to Rio de Janeiro’s Port democratizes the enjoyment of urbanity, making it accessible to all the citizens (6), Relocation housing units (13) with commercial contributes to new centralities and potentialize the existing ones by increasing their connectivity, besides, the re-programming to the existing building satisfies different demands and expectations of different citizens in order to have activities for 24 hours, even from day and night. The Favela-Bairro Program did not remove anyone from their place in order not to break existing ties and aimed at giving new centralities to those communities in order to produce a drastic change in the image of the area (See.D3).
As for working on the “informal city”, called the Favela-Bairro Program, and it has done so well for about twelve years in many favelas: turn them into barrios, that is, functioning neighborhoods that have been improved and integrated with the adjacent city.

The first step for the elaboration consisted of the definition of the boundaries of the area of intervention, analyzing and responding to its complex geographical (convergence of river, expressway, railway line), topographical (treatment of edges of rivers and channels, floorings, landfills) and social aspects as the patterns of the use of spaces and the established social practices (in both the informal and formal areas). They have used urban design as a tool for social reform, Favela-Bairro program have been built over the past seven years in more than ten favelas—including Fernao Cardim, Fuba-Campinho, Salgueiro and Vidigal—with populations ranging from 850 to 12,000 families. Jáuregui’s design initiatives range from the construction of new streets and pedestrian walkways to community centers offering recreational activities and job training, to communal kitchens where women cook together.

These various projects succeed in facilitating new streams of traffic, creating links to the city center, improving the sociological and economic status of the community. Because each favela has its own character, the solutions developed by Jáuregui and his team are specific to each community’s need, the demands of its geography, and the wishes of its residents. For example, in Salgueiro. Jáuregui Architects´interventions in Salgueiro focus on these two activities so closely linked with the identity of the favela.

The program’s goal is to integrate the favelas with the rest of the city by introducing infrastructure (roads and footpaths) and facilitating services, such as water, power, communications and new buildings functioning as new landmarks. The team’s approach focuses on the favelas' existing potential, rather than starting a new layout from scratch, by introducing elements such as plazas for public gathering, community centers, new buildings for social interaction, healthcare centers, parks and olympic village.

Manguinhos as a new landscape design of environmental quality in the project, defined by the conjugation of spaces, activities, buildings and vegetation. This linear public space is thought as a connector of the residential informal sectors, currently divided by the railway line, which we proposed to elevate. (See.E1)

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C1,C2,D1, D2, D3,E1,E2,F1- Broken City - Manguinhos Comlex / Territorial Scale, public space in the context of the divided society, http://www.jauregui.arq.br/broken_city.html
The main element of the proposal is the public walkway itself, the constitution of an urban street wall (façade) along the avenue and a new multi modal transportation interchanger (train, bus, taxis, motor-taxis, vans, bicycles) open 24 hours. This combination of interrelated elements allowed for an integrated public space eliminating existing barriers and transforming the most problematic sector in the area into one of greater virtues: from divider, to connector. (See.E2)
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The premises for the landscape design *Productive Garden* (See.F1) took as reference the Flamenco Park (See.F2), in the city of Rio de Janeiro by Roberto Burle Marx\(^4\), which was conceived as a place of relaxation, sport and culture with the values of a modern democratic space. The structuring programs of the project were carefully defined to satisfy the different age ranges of public including sport, culture and job and income generation facilities. However, within this framework, an emphasis was made in providing children and teenagers with

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alternative attractions that would integrate them to the community and prevent them from being seduced by the drug dealing activity, which is typically a key job generator in the economy of the low-income areas of the city. The project promotes a type of public space that performs as a social articulator, attracting the favela residents as well as a larger public from its surroundings.

After all these efforts, the differences before and after the Jáuregui team’s work were phenomenal; clearly the livelihood, the connectivity, and the overall social well-being of the communities were immensely improved. Connectivity in between the formal and informal parts are generated. Facing the same broken condition in between formal part Barcelona city and informal part Santa Coloma de Gramenet and Sant Adrià de Besós is the main issue we have to face. The change in the boundaries between the formal and informal, rather than extending the formal city and its regulations into the irregular spaces of “non-city”, should increasingly mean the re-making of Barcelona Metropolis itself. Rather than an integration which becomes synonymous with homogenization, the challenge is to make a Barcelona Metropolis of integrity that is multiple and diverse. Here lies the great complexity and fragility of the new generation of upgrading programs, here lies, as well, the potential and our ambition.
CHAPTER II

2.1 Broken City Metropolitan Park in Rio de Janerio, Brazil

2.2 New Connectivity in Besós River Park

2.3 After 12 + Soft +Hard

2.4 New Sequence in Building a Multiuse spine
2.2 New Connectivity in Besós River Park

2.2.1 Knit Bridges

Fernão Cardrim in Rio de Janeiro is a functioning favela-bairro, or neighborhood. The first of favelas to be transformed by Jáuregui Architects, it is located at the edge of the Faria River, which before the Favela-Barrio Project was a non-place. Jáuregui used the river to link the city to the favela and to knit together the two sides of the favela. The river was cleaned out and a sewer system installed. The inner banks were lined with concrete, and the outer edges were transformed into rails, benches, and new roadways. Bridges were added to maintain continuity and communication between the two sides of the community. (See G)

In the case of Santa Coloma de Gramanet, being an informal neighborhood is quite different from formal city “Barcelona” in terms of urban fabric and urban development, and as its critical position that is in between the formal city and informal neighborhood, Besós River has long been considered as a border, which contributes to the unbalanced development of the two sides. However, along the last nine kilometers of Besós river, Besós River Park is situated there, from the confluence of the Besós and Ripoll rivers to the river mouth on the Mediterranean Sea. Covering a total area of 115 hectares, like the largest green spaces in New York, this is one of the largest green spaces in the Barcelona metropolitan area and is part of the urban continuum of the cities of Barcelona, Santa Coloma de Gramanet, Sant Adrià de Besós and Montcada i Reixac. Despite intense human pressure, the Besós River Park features a large number of environments that are home to a considerable diversity of organisms and link the Collserola massif to the Serralada de Marina mountain range, and the

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5 Faria River, http://en.wikipedia.org/wiki/Faria_Timb%C3%B3_River
seafront to the region’s inland area. Water, leisure and nature. The Besós River features a recovered environment in which nature and leisure exist side by side, in the very heart of the Barcelona metropolitan area, along the last stretch to the river mouth on the Mediterranean Sea. Its exceptional location offers the people of the Riverside municipalities a large quality, safe and easily accessible green space in which to enjoy their leisure time and peace and quiet.

Here we try to use the Besós River Park to link to the Santa Coloma de Gramanet and to Barcelona City, and aside from the existing bridges, several pedestrian bridges are proposed to knit together the two sides of the river, as if they were string to knit two different urban cloths, one is with spontaneously grown urban fabric, stepped and hilly and the other one is grided street pattern, topographically flat. New circulation routes, pedestrian ways change people’s costumes, which stimulates inhabitants to explore new walking routes, new circulation routes change the urban structure, making connections and creating areas of concentration. The connection also involves interventions around Besós boundaries at day and at night, aimed at breaking down the edges by intervening mixed-use areas together with new circulations that improve access to external circulation routes, both pedestrian and vehicular, making it possible to move in and out. Recreation, business, art and culture and other relevant facilities at key edge locations, to facilitate interaction between Barcelona city and the other side across the river.

H1. Existing Connectivity Between La Sagrera and Besós River Park
As being another ambitious urban park, before knitting the two river sides, we analyze the exiting connection in between La Sagrera and Besós River Park, and based on the proposed connectivity between La Sagrera and Besós River Park, it’s obvious that as being an important part of Green Diagonal, there is a lack of connection between the end of La Sagrera and Besós River Park. Here we propose an extension of the pedestrian in La Sagrera, across the Parc de la Trinitat, over the besós river and then jump into the Gan Zam Area, Santa Coloma de Gramenet. (See.H2)

H2 : Disconnectivity between Green Diagonal and Besós River Park by Ma Li

Taking the complicated topography into consideration, La Sagrera, Besós River Park and Parc de la Trinitat are situated in a critical topographic condition. Firstly, we analyze the elevation difference from the start point of La Sagrera, the difference in level of viaduct along Parc de la Trinitat, and Gan Zam area in Santa Coloma. We found that this critical point is right among Parc de la Trinitat, Besós River Park, and two mountains Castellar Massif and Serralada de Marina, which has great potential to have a bridge linking these four important urban elements. There are four disconnected points within, the disconnected pedestrian in La Sagrera to Parc de la Trinitat, Parc de la Trinitat to Besós River Park.
Park, Parc de la Trinitat to Castellar Massif and Serralada de Marina, and Parc de la Trinitat to Gan Zam area in Santa Coloma de Gramanet. So the proposed bridged carries these four connectivities with a two-way interaction in both banks along the Besós River Park.

So proposed pedestrian bridge stretches from the end of the pedestrian in La Sagrera then going up along the viaduct, before arriving the Besós River Park, the bridge divides into two directions, one is down to connect with Castellar Massif and the other one is jumping across the Besós River and right arrive on the Gan Zam area, and this brunch of pedestrian are separated into two directions again, one is stretching till arrives at Serralada de Marina in order to make a new connection in between, meanwhile, the other pedestrian draws a curve line and with an end almost perpendicular to Besós River (See.H3).
H3: New Pedestrian ‘s Extension from “Green Diagonal” to Gan Zam Area by Ma Li
I: New Pedestrian Bridges Knitting the Broken River Sides by Ma Li

Based on the proposed connectivity between *La Sagrera* and *Besós River Park* and existing transportation bridge, several pedestrian bridges are proposed to knit the two sides of the river in comparation of those heavy existing transportation bridges, as if they were delicate string knitting these two different urban fabrics. (See.I)
CHAPTER II

2.1 Broken City Metropolitan Park in Rio de Janerio, Brazil

2.2 New Connectivity in Besós River Park

2.3 After 12 + Soft +Hard

2.4 New Sequence in Building a Multiuse spine
2.2 New Connectivity in Besós River Park-2.22 Public Snake

Providencia in Rio de Janeiro, Brazil is not an island within the urban sea. It forms part of the city (See.J). The city consists of interacting physical, political, social, statutory and ephemeral layers. Together they work in a network to provide services in the fields of transport, planning, economic development and regeneration. Providencia today is enclosed in the permanent presence of social exclusion and poverty.\(^6\) Past and future are only allowed to enter between 9am and 12pm. Time knows yesterday, today and tomorrow for anyone and anyplace within the city. The city lives 24 hours a day. Providencia of tomorrow is the city layed in time.

In Providencia, urban living rooms, green pockets, shadow and roof space, they autonomously cloud to form a living hybrid space- giving birth to a snake of local services and events, eating inside out. Urban living room is a space where encourages people to meet together and have more interactions among inhabitants. Green pockets are places where people can have more leisure time inside vegetation with a nice view. Shadow spaces are places offering a semi-open space without anxiety caused by sunshine. Roof spaces are a full use of existing topography and terrace, terrancing the topography creates a new manipulation connecting the city, through which, numerous viewpoints are created toward the river and mountain; a garden are realized on those terraces which locate on the mid-section of a hilly incline, the behaviour of reposing at a high level provides an identifying view of the city to the individual (See.K1).

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J.K1,K2-See above, P.46-47, P.50
K1 : Urban Living Rooms, Green Pockets, Shadow Scapes, Roof Scapes

K2 : Public Snake in Providencia
In the proposal, a snake is also a sequence of different events and activities that they call "toys" creating an environment that actively seeks participation of a diverse range of communities. Ephemeral objects and programs are inserted into the public snake to add spatial quality and assist in creating local-level events, including leisure, education, community, economy and even tradition. This includes ensuring a range of youth and family friendly activations are promoted and provide and support the provision pf accessible, responsive and appropriate services that meet the changing needs of residents and visitors to the city from day to night. It also includes encouraging events that are affordable and accessible (See.K2).

Let's back to Santa Coloma de Gramanet, as the longest urban green park, Besós River Park offers a great opportunity for creating an open-space sequence. Besós River Park cuts and divides the city transversely, and its critical position right in between two urban fabrics, meanwhile, the urban fabrics along the river side are growing almost perpendicular to the river. What we propose is taking use of the exiting linear green sequence and creating more public spaces along the river, to make the linear space stretch into the two river banks and to weaken the its division effect, thus, Besós River Park is not a linear park any more, it's becoming a huge urban green park in between Barcelona metropolitan area and Santa Coloma de Gramenent, Sant Adriá de Besós and Badalona, from confluence of the Besós and Ripoll rivers to the river month on the Mediterranean Sea (See.K3).

Similar with the idea of urban, large area of living rooms, green pockets, shadow spaces, and the roof are taken into consideration along the besós river band.
K3: *Public Snake* along the Besós River Park by Ma Li
CHAPTER II

2.1 Broken City Metropolitan Park in Rio de Janeiro, Brazil

2.2 New Connectivity in Besós River Park

2.3 After 12 + Soft +Hard

2.4 New Sequence in Building a Multiuse spine
2.3 After 12 + Soft + Hard

Providencia in these layers and time propose three interdependent projects. Each project acts on a different scale and through a specific relationship between layers and time. Together they overlap into a multi-direction redevelopment scheme for a central part of Rio de Janerio advocating processes of negotiation and cross-financing which transgress the limiting institutional framework of the Favela-Bairro programme.

*Providencia* 3 puts into question the existing Favela-Barrio programme. Any attempt to make structural changes to a system that does not sufficiently integrate all its parts has to go beyond the level of individual parts. By placing Providencia inside its urban context, it becomes the starting point for the regeneration of a wider area of Rio de Janerio. The favela thereby functions as a catalyst to open up negotiations between the different actors that shape the city (See L).

Soft stimulates the growth of pockets of events and local services within the dense core of the favela, deriving its movements and intensities from the self-organizing dynamic inherent in Providencia. Existing spatial and

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7 Jorge Fiori, Hugo Hinsley, Elena Pascolo, Kim Thornton, Transforming cities, design in the Favelas of Rio de Janeiro, Publication funded by The British Council Architectural Association, 2001, Registered in England No. 171402, L. M1-4, Same Above, P.48
programmatic potentials serve as seeds of the city. Together with inserted programs, and creation of different types of open spaces in order to form a public sequence.

Favela development is city development, city development is Favela development. After 12 places Providencia within its urban context by using the physical, social and economic redefinition of Providencia to initiate the regeneration of a wider area of the city. To achieve this, adjacent derelict federal land is re-used for the relocation of risk area housing and the establishment of commercial activities, while the introduction of an economic investment zone extends employment patterns emerging around the central station to Providencia (See.M1-4).

The favela is used as a starting point for investigating urban development needs, and common issues are then identified within peripheral areas, such as the decayed port, vast derelict railway land, and low-quality social housing. These negatives are then transformed into potential solutions.

Negotiation and relocation. The construction of new high-density housing to relocate residents of demolition area starts a process of redeveloping the federally owned railway land framing Providencia in the west. Small-scale commercial activities operating at street level from part of an overall mix-use concept to cross-finance the housing development.
Investment zone. Using tax reduction as an incentive, a ten-year investment zone for commercial activities fosters the recent growth of the central station area. The re-use of derelict sites within this zone, including the demolished part of Providencia, creates new employment and income needed to offset the economic decline of the harbour and railway.

M4 : Investment Zone

Hard plugs Providencia directly into the service network of the city, making traditional interventions for site clearance inside the favela obsolete. In addition to linear infrastructure, used to fortify dangerous edge conditions, a rock-climbing structure hosting professional services opens up an intermediary space for residents of Providencia and the city. A retraced historical path relocates the heritage of Providencia within the cultural landscape of Rio de Janeiro.

Professional services including medical care, legal advice, educational institution, post offices, banks and retail and other different services are plugged into Providencia. Located at the southern fringe, where favela and formal city blur, the open services grow uphill, negotiating in time between stairs and forces of revitalization.

The investment zone and other plug-in services giving the communities into a more thrive atmosphere.

In the case of Besós River, the derelict land around the river park offers the potential for large-scale transformation of the urban fabric in the area. In contrast, “small solutions” may bring surprisingly effective results. They maybe less obvious, but more feasible, more flexible. Santa Coloma de Gramenet and Sant Adrià de Besós interior provide an informal organization that fragments space and time. Flexible organization allow for constant changes and time becomes a determinant dimension. The Besós River Park organizes itself as a sequence of imaginary “switches” that go on and off at different hours of the day. Here the concepts of mixed-use and spatial flexibility are taken to the extreme. Investment zone, and diverse plug-in activities and events are inserted into the strategic area. The re-programming of these areas along the riverside takes the social, economy and culture into consideration in building a thrive urban environment along the Besós River aiming to seek participation of a diverse range of youth and family, citizens and tourists. The friendly activations are
promoted and provided and support the provision of accessible and appropriate services that meet the rapid changing needs of residents, business, students and visitors to the city. It also includes encouraging events, for instance, an open air concert and cinema, outdoor exhibitions that are affordable and accessible (See.1).

As a new sequence with a multifunction feature stating from Gan Zam to the mouth of Mediterranean sea. It opens a sequence for residential and commercial, public and private, cultural and recreational, programmed and unprogrammed, day and night. As the first arriving point from the pedestrian extension in La Sagrera, to be similar with reception in a hotel, one area full of all the informations to get an idea and an instruction about the sequence that we are going to visit. The industrial zone is going to be transformed into an investment zone meshes business and commerce, as the idea of using derelict sites within the zone in Providencia, this post-industrial encourages business to develop for customer needs, especially encourages people into the city at night. Some commercial activities take place at times which relate to business hours in other parts of the world, such as the USA and Japan. A wide range of emergency services keep functioning round the clock, and many servicing activities and deliveries are best done out of hours. Encouraging people into the city at night will support economic prosperity and encourage businesses to develop and cater for customer needs. The City of Melbourne’s Policy for the 24 Hour City supports programs and partnerships to promote a night time culture based on equity, tolerance, respect and shared responsibility. The policy also recognises the need to balance night-time activity with the needs of city residents for rest and recuperation. This post-industrial business area needs government’s support on key social and amenity issues. The last, but not the least, right located the mouth of Mediterranean sea near to sea shore, the great benefit of the natural landscape offers a great opportunity for an artificial landscape invention, as if the artificial landscape were a terrace, it offers a nice place appreciating the nature view with a mix-use of venue for inside and outside art, performances and education programs.
The plug-in mixed-use programs and service blur the boundary between city and non-city, and mixed-use sequence enhance the image of this linear park. The open-up of reception zone, post-industrial investment zone and terrace build a new centrality to this new mixed-use spine, re-use of the derelict land for plug-in activities along the river park for large-scale transformation of morphology in the area is transform the existing urban park to a central spine park (See.I).
CHAPTER II

2.1 Broken City Metropolitan Park in Rio de Janeiro, Brazil

2.2 New Connectivity in Besós River Park

2.3 After 12 + Soft + Hard

2.4 New Sequence in Building a Multiuse spine
2.4 New Sequence in Building a Multiuse

2.41 Gan Zam_factory extension

Gan Zam (RECEPTION)
- Factory Extension
- Beer Museum
- Housing & Office
- Bar & Restaurant
- Open air Concert Park
- Sculpture Landmark

J1. Strategic Area: Gan Zam and its new programs by Ma Li

Gan Zam area is the starting point where the pedestrian bridge arrives where we call reception area (See.J1), it means that a spectacular welcome is given to all. The 24-hour concept supports the project of students Iago C. Ko and his partner, which propose a mix-used extension for the beer and chocolate drink factories in Gan Zam area, Santa Coloma de Gramanet. And as a staring point of the new sequence, it will focus on transforming the industrial area into a urban one, where there is a mixed-use of offices, housing, parking and a tiny civic center. The activities inside the reception area requires help to get an general idea about the new 24-hour sequence for new arrivals, which is only accomplished by overwhelming previously undemourished senses. The new Gan Zam area is administered under the most these two conditions: well-being and urbanized. Gan Zam area as a new public space open-air activities
(See J2-3), a sculpture is going to be set as a landmark for this important switching point for being a connector in between Green Diagonal and Besòs River Park.

J2. Master plan and Section: Gan Zam extension by Iago C. Ko (5th course student)

J3. Aerial View: Gan Zam extension by Iago C. Ko (5th course student)
2.4 New Sequence in Building a Multiuse

2.42 post-industrial regeneration---business

**Industry Area (NEW CBD)**
- Post-industrial Regeneration

- Housing & Office
- Bar & Restaurant
- Gym & School
- Shopping
- Post-industrial Park

- High rise Landmark

The current industrial area, part of the industrial factories have been abandoned (See.K1). And the design is mainly focusing its regeneration into a new business district which is accompanied by housing and office, bar and restaurant, gym and school together with a post-industrial park. In renewal project *Esch Belval* in France, the idea of transforming from Luxembourg’s largest steelworks to a dynamic mixed-use quarter is as the same as post-industrial regeneration along the *Besós River Park*.

For several decades Esch/Belval was home to the country’s largest steel plant. Today only a few remnants of the buildings are left. The site is developing into a
modern city quarter with new economic, cultural and residential activities aimed at stimulating growth in the entire South region. Belval is located close to the French border, adjacent to the municipalities of Esch-sur-Alzette (about 30,000 inhabitants, second largest city in Luxembourg) and Sanme (appro. 15,000 inhabitants). Upon completion, the whole quarter will have up to 5,000 inhabitants and 20,000 employees. 120,000 square meters of gross floor area for office, retail and housing use are being realized. The two blast furnaces along with some adjacent buildings will be preserved and integrated into the new city quarter (See. K2-3). Thus they constitute the landmarks of Belval and serve as a reminder of the region’s industrial past.

Here we summarize the two principles in renewal design for industrial area along the Besós River.

- To tackle the totality of abandoned industrial area and their regeneration.
- To integrate all possible land-use (economic activities, public and private)

And the business oriented together with mixed-use intervention into this industrial zone will contribute to the increase of inhabitants and employees living and working in this area, which helps to build a thrive neighbourhood along Besós River. Besides, a finance high-rise building as a new landmark will be a reminder of its transformation from an industrial zone to a modern mixed-use city zone.

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K2: Previous Steelworks

K3: Proposal for Esch Belval

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8 Urban Renewal Project Esch/Belval:
http://www.emi-network.eu/Research/Polycentric_metropolitan_areas/News_publications/Urban_renewal_project_Esch_Belval_From_Luxembourg%E2%80%99s_largest_steelworks_to_a_dynamic_mixed_use_city_quarter
K2-3: Same Above
2.4 New Sequence in Building a Multiuse

2.43 seashore_waterfront artificial intention

**Waterfront Area (TERRANCE)**
- Artificial Intervention
- Incorporate into infrastructure

- Art & Performance
- Education Program
- Museum with Open-air Exhibition
- Urban Park
- Landscape Landmark

L1. Strategic Area: Seashore and its new programs by Ma Li

The waterfront area facing the mouth of the Mediterranean Sea, as a terrace in front of the nature landscape (See.L1), a multipurpose venue for art, performances and educational programs, with cafe and underground parking, and finishing at a series of new urban beaches along the waterfront. As visitors make their way down through the site, they come across a variety of artworks, either displayed along the landscape, or incorporated into the infrastructure of the park, creating a saturated environment that heightens the experience of the natural surroundings. As we can see in Olympic Sculpture Park in Seattle, Washington, the project is located on an industrial site at the water’s edge. The design creates a continuous constructed landscape for art, forms an uninterrupted Z-shaped "green" platform, and descends 40 feet from the city to the water, capitalizing on
views of skylines and Elliot Bay and rising over the existing infrastructure to reconnect the urban core to the revitalized waterfront (See.L2-3).

L2. Seattle Art Museum: Olympic Sculpture Park

An exhibition pavilion provides space for art, performances and educational programming. From this pavilion, the pedestrian route descends to the water, linking three new archetypal landscapes of the northwest: a dense temperate evergreen forest, a deciduous forest and a shoreline garden.⁹

L3. Before and After: Olympic Sculpture Park

The design not only brings sculpture outside of the museum walls but brings the park itself as an artificial landscape landmark into Barcelona city.

⁹ Seattle Art Museum: Olympic Sculpture Park
http://www.weissmanfredi.com/project/seattle-art-museum-olympic-sculpture-park
L2-3, Same Above
CHAPTER III

3.1 The Central Park and Its Centrality to New York

3.2 Transformation from Urban Park to Central Spine
3.1 The Central Park and Its Centrality to New York

Comparing with the largest green space Central Park in New York metropolitan, which has been a National Historic Landmark since 1962. The Central Park locates right in the center of the city “...It offers wide opportunities and abundant facilities for exercise, for rest, for rural suggestions, and for perceptive education, the amusement are so classified that all ages and tastes may be gratified. No exclusiveness obtains. Freedom of access to all parts of the park, under the necessary restrictions, has been the policy in its management. The use of a public park-like Liberty itself-can be made equitable only by a fair apportionment of the freedom of use for any one class meant the destruction of other reasonable possibilities for use...” 10

The park, moreover, has had a very marked effect in making New York City attractive to visitors, and in thus increasing its trade, it is the most profitable enterprise ever undertaken by the city, and in the higher aspect of its moral advantages, its sanitary benefits, its features of attraction and interest to large numbers of people who seek amusement, the Central Park with its annually developing beauties will remain. And the public desire for participation in the newly available pleasure of winter as well as of summer in the park has already be realized. The Park, as a whole, is undoubtedly expected to afford to citizens of the metropolis, from day to night, day after day, year after year.

The central Park is a work of more than local and immediate importance. The dominant and justifying purpose of Central Park was conceived to be that of permanently affording, in the densely populated central portion of an immerse metropolis11, Central Park looked forward quite definitely to a vast and comprehensive system of recreation facilities for the metropolis , in which Central Park would be but a single unit properly specialized in function because of the supplementary functions of the rest of the system. “We regard Central Park as an integral part of what today is the metropolis of the nation , and in the future will be the center of exchanges for the world, and the park as part of a system of grounds, of which the Central Park also is merely a single feature, designed for the recreation of the whole people of the metropolis and their customers and guests from all parts of the world for centuries to come ”12

Rethink the Besós River Park, being a supplementary of urban parks widely located in the border of metropolitan area and linked together by a system of

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10 Frederick Lam Olmsted, JR. and Theodora Kimball, Forty years of landscape architecture: Central Park, October 1973, ISBN 0 262 15009 1, P.407
11 See above P.188
12 Report of the Commissioners of Prospect Park, Brooklyn, 1866, P.94
connecting pedestrian bridges. In terms of the geographic and geometric condition to Barcelona city plan, these two ambitious urban parks play essential role in understanding the centrality to Barcelona. As an extension of interpretation of new centrality in Pl. Les Glories, La Sagrera as another ambitious urban park which occupies large area of Green Diagonal in Barcelona City and forms one component in a serious of urban space, from La ciutadella, through Les Glories and La Sagrera, till Parc de la Trinitat, with the newly-proposed extension pedestrian jumps from La Sagrera to Besós River Park, in this way, Green Diagonal will have a continuum which is from the confluence of the Besós and Ripoll rivers to the river mouth on the Mediterranean Sea, which means this new connection is going to help Green Diagonal plays a new role to metropolis and the Barcelona green system will be updated. No matter La Sagrera or Besós River Park are only components to this new urban space serious linking La ciutadella, Les Glories, La Sagrera, Parc de la Trinitat and Besós River Park, thus, a serious of parks widely dispersed throughout the metropolitan area and linked together by a pedestrian walkway is not far to realize.

M. New Mixed-use Sequence and Its New Centrality by Ma Li

Besides, the public snake together with plug-in mixed-use programs and service along Besós River Park offers wide opportunities for citizens and visitors for living, for working for business, for education, for exercise, for rest..etc. This urban park will have a mixed-use for different citizens and visitors, thus a urban park meshes residential and commercial, public and private, cultural and
recreational, programmed and unprogrammed in order to incite the whole metropolis to share experiences, in this way, Besós River Park is becoming a *Linear Center for Exchanges* with wide accessibility realized by newly-proposed pedestrian bridges and their relevant circulation routes, thus, a new mixed-use sequence for the whole metropolis (See.M). On the other hand, plug-in mixed-use programs and service blur the boundary in Barcelona city and Santa Coloma de Gramenent, Sant Adrià de Besós and Badalona. With more population from both sides along the river park coming to this linear center for sharing different experience and get satisfaction according to their own expectations, Besós River Park is not a border for Barcelona city any more, and it’s going to be a center spine park for metropolis. In a supplementary series of parks and subordinate programs and activities, *Green Diagonal* is becoming a one-side brunch of new central spine, and the new role that *Green Diagonal* plays stimulates the possibilities of creating other brunches in the other side of center spine park in the near future, which contributes to the potential of centrality in Besós River Park.
CHAPTER III

3.1 The Central Park and Its Centrality to New York

3.2 Transformation from Urban Park to Central Spine
3.2 Transformation from Urban Park to Central Spine

N. New Iconic and High-rise Building Landmark Network by Ma Li

The desire for iconic building has become an urbanistic preoccupation to change the image of city. One of the most relevant examples is the *Guggenheim Museum* in Bilbao, Spain, where Frank Gehry brought worldwide attention to a riverfront restructuring process through the insertion of a singular piece. The establishment of a Guggenheim satellite museum transformed an industrial town into an important cultural destination. Bilbao’s redevelopment, as a whole, has precipitated from and depend on the dynamics of Gehry’s piece\(^\text{13}\). And in Santa Coloma, the odd infrastructural geometries and the factories left very little space for other more cultural and service based activities. The decline after 2008 of the industries caused by the crisis and large-scale production engines established potential grounds for a successful restructuring process that marked a very clear before and after image for the besós river and even for the Santa. Coloma and

San. Andreu. In the proposal A point is sculpture landmark, B point is another high-rise buildings that corresponding to the other high-rise buildings in Metropolis Barcelona. C point with the strategic area where it locates are a landscape landmark, and all these new iconic landmarks along the riverside are not only contributing to have a new landmark network in Barcelona, but also transforming the Besós river a new into a new visiting destination. With new landmarks appealing more visitors to the river, more and more people get to know this place helps Besós River have a new image (See.N).

As a new central park in between the “24-hour city” and “12-hour town” which consists of a new landscape design of environmental quality, defined by the conjugation of spaces, activities, buildings and vegetation. This linear public space is thought as a connector of the residential informal sectors, currently divided by the Besós River, which we proposed to elevate in order to build a thrive neighbour-hood in both sides and to change the image of “12-hour town” into one part of the “24-hour Metropolis”. 
CONCLUSION

Although the various projects are clearly differentiated by site, they share a common strategy. The underlying idea is that the area along the Besós River Park including Santa Coloma de Gramenet are valuable urban territory, often representing generations of investment by their inhabitants in both physical fabric and social underpinning.

The Santa Coloma are incredibly dense agglomerations of dwellings, often built on sloping land; they often have informal urban tissues and are accessible only by narrow pedestrian paths. The aim of the 24-hour project is to make these formerly alienated areas as integral part of the Barcelona city. And there are two key means to better integrate not only Santa Coloma de Gramenet but also those areas along the river. Pedestrian bridges are proposed to knit the two different urban fabrics, as if they were needles knitting the broken parts. The connection also involves interventions around Besós boundaries at day and at night, aimed at breaking down the edges by intervening mixed-use areas together with new circulations that improve access to external circulation routes, both pedestrian and vehicular, making it possible to move in and out. Recreation, business, art and culture and other relevant facilities at key edge locations, to facilitate interaction between Barcelona city and the other side across the river. In this 24-hour urban renewal efforts in our hope and confidence to effect real change in the lives of inhabitants. Complex strategies for social and economic
change are integral to the development. Besides, we encourage that residents are involved in the projects from the beginning, providing information and participating in planning. This involvement is formalized during the development and implementation of the projects. As we can see in the Favela projects, favela dwellers are hired as a significant proportion of the workforce. They receive training, income and work experience, as well as the community benefit of project ownership, which also gives us a new perspective about inhabitant’s participation.

On the other hand, the new elements inserted into the existing fabric along the both sides of the river exhibit a range of formal expression. There is clearly the intention to design structures that will enrich the urban environment, create iconic forms to enhance identity, and strengthen local culture. Keeping the new structures modest also promotes a close relationship between the interventions and the surrounding unimproved communities, minimizing the sensation of there being two radically different classes of development.

As a whole, the interventions can be seen as forming an interconnected landscape arsing from the provision of a new infrastructure of public facilities. This landscape is the beginning of a system to facilitate public life that forms a framework from which the changing residential neighborhood can continue to develop. This landscape system is multidimensional in its potential to enrich social interaction, provide public and recreational facilities, increase employment, and improve environmental conditions in order to have a thrive neighborhood to integrate the informal one into the whole metropolis.
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10. Report of the Commissioners of Prospect Park, Brooklyn, 1866

