



Habitat Professional Forum

Rethinking Lloret 2030

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1 PREAMBLE

The Habitat Professionals forum (HPF) is a voluntary affiliation organization of international and regional associations of human settlements professionals involved in sustainable urban development

The HPF was established in 1999 under the auspices of UN Habitat as an interdisciplinary partnership of human settlements professionals and UN Habitat, with the purpose of promote sustainable and equitable human settlements development.

The HPF aims to foster cooperation and partnership between the human settlements professionals, UN-Habitat, the private sector and governments around the world through dialogue and partnership and by providing leading-edge information and expertise that contribute the implementation of the habitat agenda and the sustainable urban development.

The Habitat Professionals Urban Lab initiative has been designed to support cities and regions in order to create better human settlements around the world by bringing together the knowledge and know-how of the experts, members of the international and regional associations that are part of Habitat Professionals Forum.

2 INTRODUCTION

Lloret de Mar is an outstanding tourist destination in Catalunya, situated about 80 km northwest of Barcelona, in the province of Girona,



Lloret de Mar is located at the southern part of “Costa Brava”, an extremely attractive tourist region in the Mediterranean coast on all spatial scales.

Lloret de Mar has a population of about 40.000, together with the neighboring municipalities of Blanes and Tossa de Mar as well on the coast and Vidreres in the “Hinterland”. Lloret de Mar can be seen as a “Sub-Region” with a significant role in the Catalanian /

Girona Province town system, with more than 80.000 inhabitants.

Lloret welcomes tourists from all over Europe and the world.

The major routes of influx are by car and bus from the French border, in the north. Also via Barcelona Airport (BCN) in El Prat. considering that El Prat Airport is located southeast of Barcelona, therefore transfers to Lloret have to pass through the city. Another access could be via Girona Airport which has lost a lot of frequencies during the last years due to strategic decisions by the



major carrier Ryan Air, nonetheless the infrastructure is there ready and in operation. Train access is limited because there is no station in Lloret restraining its capacity for operating as an international hub, access from Barcelona is via Blanes train station and there by bus to Lloret, or via Girona High Speed Rail Station and from there also by bus.

The sub-region Lloret – Blanes – Tossa de Mar welcomes about 1,5 Mio.

tourists per year with more than 5 Mio. overnight-stays. There are about

30.000 Hotel beds in Lloret, additionally there is a campground and private rooms and villas.

In general terms at this point Lloret presents several big challenges that could be necessary to address. Lloret had its hey-days in the 1970s-2000, when mass-tourism was booming – meanwhile the tourism industry has changed a lot lifestyle, internet, short-term-decisions, therefore update the facilities and the way in which the industry is approached in order to keep and increase its traditional success

Today Lloret has the reputation of being a pure party-location, thus been very much competing via cheap prices. The structure of its activity is very much based in seasonality, however its High-season is getting shorter and shorter.

This development of the present economic base is neither good for the tourism business in Lloret nor for the local population.

Until today Lloret the Mar and surroundings are poorly connected to the high-level-road-and train networks. It is important to also note that the link with both airports Barcelona and Girona is somehow complicated. Nonetheless there are plans from the Generalitat and from the local authorities to try to solve these drawbacks.

There is information that there are already elaborated plans for such a connection and construction works are already under way.

So what was named as one of the major challenges of Lloret and the region in the studies / analysis to which so far we already have access should be seen as seriously approached in the next few years.

3 EXISTING PLANNING DOCUMENTS

In recent years a lot of analysis and planning has been done supported by the Generalitat, the local authorities and with the participation of the local private sector. Even that those studies are somehow planned with a broader scope, they are mainly focused on the tourism sector,

- Strategic Tourism Plan 2010-2014
- Operative Plan – Renovation of Tourist Destination: Lloret De Mar

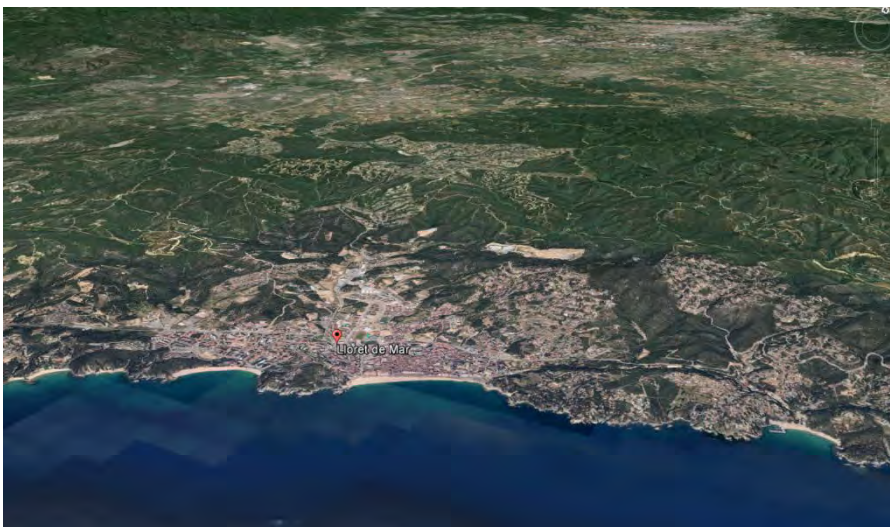
It has to be highlighted, that those plans have been jointly developed by The Municipality of Lloret De Mar, the Catalonia Government, and the Private Sector which is an outstanding achievement.

There is also a Mobility Plan and Zoning documents, but it has to be mentioned that whereas the planning documents in the fields of tourism and also in mobility are very well elaborated, the zoning regulations do not go into that level of detail but basically just differentiate between areas where the city can still expand and areas where there can be no construction activity.



Although in economic terms it is a fact, that current Lloret can be seen as an almost mono-functional tourism town, it has to be seen that 40.000 people are permanently living there and more might come with the planned diversification of the economic base, therefore it is inevitable to have a more holistic look at the city.

Considering this situation, the main objective of this Urban Lab is to focus on a holistic view of the city, not only concentrated on tourism. It is clear that the main aim of this Urban Lab is to encourage the people of Lloret De Mar that should be the ones that formulate the future of their city.



4 ANALYSIS

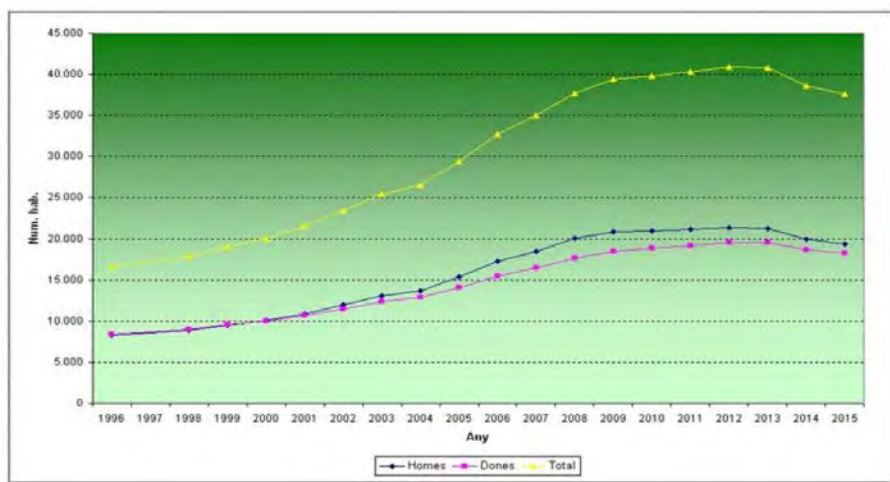
4.1 MAIN FIGURES

Even despite the changes in tourism the number of inhabitants in Lloret de Mar was rapidly growing until recently, and there were prognosis and plans for further growth, with estimations of up to 80.000 permanent population. Due to economic crises in Europe and especially in Spain the growth curve changed over recent years, and after more than 40.000 inhabitants in 2013 now there are about 38.000 permanent residents.

Table 1: Population and area figures.

CATALUNYA	COMARCA DE LA SELVA	LLORET DE MAR
Area (km ²) 32.108	Area (km ²) 995	Area (km ²) 48,7
Population (2015) 7.508.106	Population (2015) 168.555	Population (2015) 37.618
Density (Inhab/km ²) 233,8	Density (Inhab/km ²) 169,4	Density (Inhab/km ²) 772,3

Fig. 1: Population development Lloret de Mar 1996–2015.



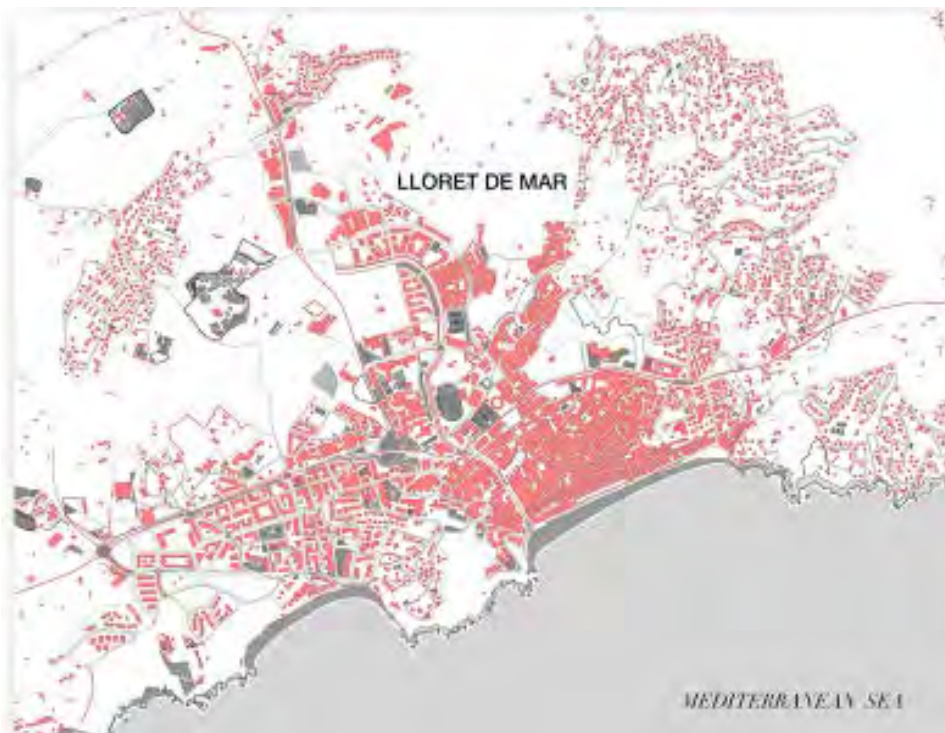


Lloret de Mar consists of a historic center with a population of about 7.550, several extensions of the center with a population of about 11.900, and new developments southwest of the center, dominated by apartment blocks housing some 5,100 inhabs

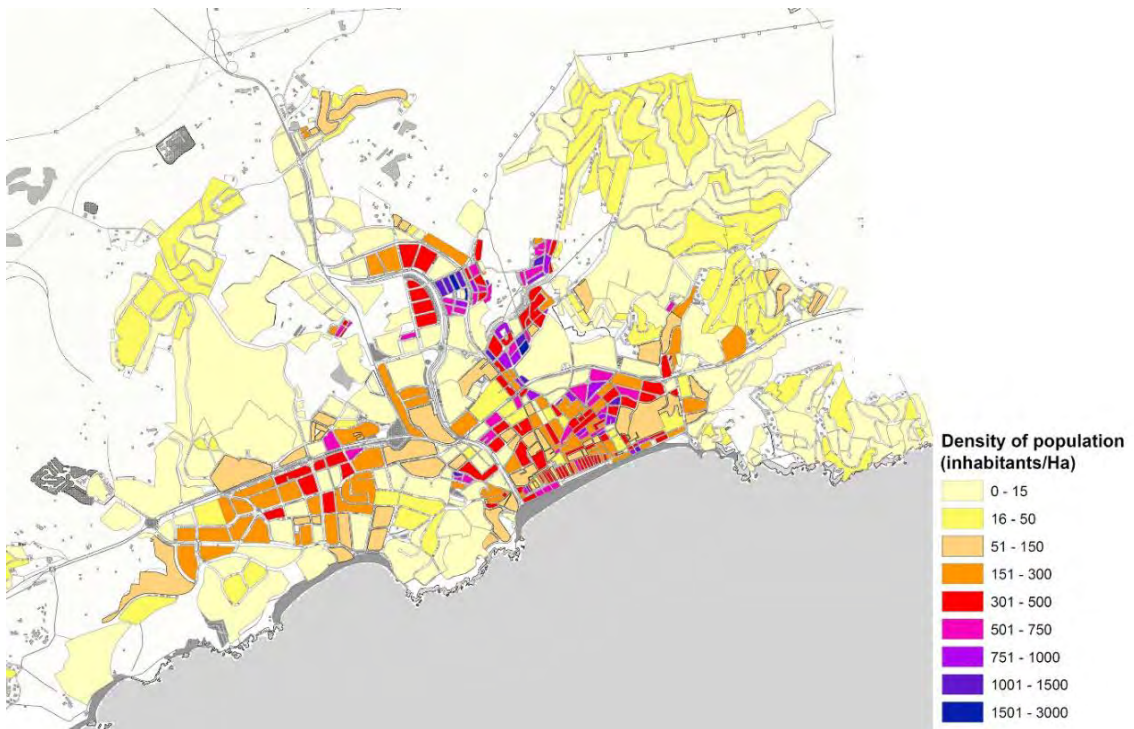
There are also several settlements with single-family-homes, as well very close to the center as further away housing some 13.770 inhabitants.

One of the big challenges of Lloret is that people are moving out of the center due to several reasons. One been the intensity of tourism in high season.

People leaving there find somehow annoying the intensity of tourism in high season, that completely dominates the city due to the type of tourism dominated by the low end of the scale and the usual noise and inconvenience generated in the historic center.



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When people move out it means that there is a significant amount of empty houses and it is difficult for businesses to operate year round considering that there are not many customers to attend.

Indeed, there are several businesses that have decided to operate only in the high season, generating empty neighborhoods and almost null commercial activity in low season.

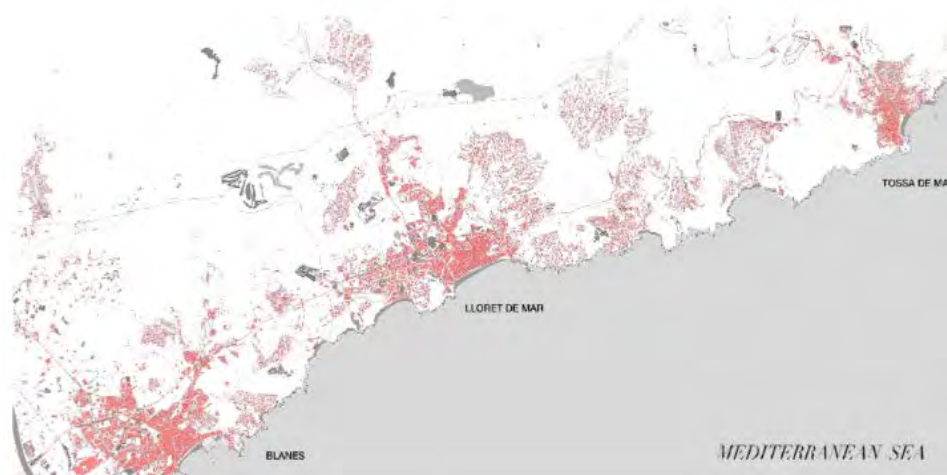
It is clear that such structure of urban occupation generates costs to the municipality in relation to the density of use of infrastructure.

Certainly there should be extremely high infrastructure costs for the outskirts compared to the center of the urban footprint. Low-density-areas generates additional costs for the city

Now days the Historic Center is still the absolute economic heart of the city, and it is the clear intention to keep it that way regardless the touristic season. Thus present and future development policies must create a steady economic activity and social use of the historic center, in order to generate benefits for the people and for the municipality.

4.2 TOURISM

From the tourism point of view Lloret is important part of a sub-region formed by Blanes, Lloret de Mar, and Tossa de Mar, these three locations form a section of the Costa Brava and are somehow integrated.



Today this micro-region counts with a total population of some 83,000 inhabitants. Around 40,000 beds and 1.5 Mio tourists per year, counting more than 5 Mio overnight stays. Only Lloret de Mar has some 30,000 hotel beds available.

Lloret has an old history that dates to Roman times. There are historical remains of Iberian and Roman civilizations at various archeological sites.

The first written references to Lloret de Mar can be found in documents from 966 as “Loredó” from the Latin word “lauretum” (bay laurel). Like many Mediterranean coastal towns, Lloret was frequently invaded by the Saracens in the Middle Ages. It is said that the traditional “Ball de Plaça” (the Dance in the Town Square) dates from this era.

Until the 15th century, the town’s center was located one kilometer inland, next to the “Chapel of Les Alegries” This was the town’s main church before the “Church



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of Sant Romà” was built to protect itself from attacks from English, French, Turkish and Algerian pirates.

Lloret’s port became commercially important in the 18th century. It no longer exists but the Garriga Houses built by “Indianos”, rich Spanish immigrants returning from the Americas, remind us of this affluent era.



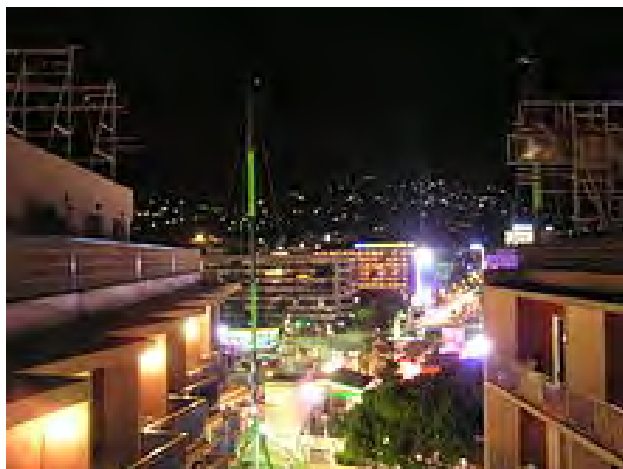
Lloret de Mar started as one of the main sun and sand resorts for Europe and in the late 50’s and in the 60’s was at the top of the ranks in the Spanish Mediterranean Costa Brava.

In 1987, 27% of the total tourism establishment offering of the Costa Brava was concentrated in Lloret de Mar, with 49% of the total hotel beds offering

Every year, Lloret welcomes 12% of the tourists who visit Catalonia and over 40% of the tourists who visit the Costa Brava. Lloret de Mar is ranked the fifth largest sun and sand destination in Spain and the largest in Catalonia in terms of the number of hotel beds.

Today 50% of its hotel accommodation offering is concentrated in hotels with three stars or more and, while 64% of the five-star and luxury hotel accommodation on the Costa Brava is located in the town.

Lloret de Mar's hotel offering in 2013 consisted of 30,000 hotel beds and over 120





establishments, of which 13,000 beds were in three-star hotels and 11,000 in four and five-star hotels.

Lloret de Mar boasts over 120 hotel establishments with approximately 30,000 hotel beds.

The average stay is 5 days and the average occupancy rate is 60%

The sports tourism destination (Destinació de Turisme Esportiu - DTE) certificate is a specialist seal awarded by the Catalan Tourism Agency (Agència Catalana de Turisme - ACT) with the goal of promoting tourism destinations equipped for various kinds of sports and which stand out for their offering of high quality resources and services for elite, professional and amateur sports people, along with tourists keen on sports activities.

Lloret de Mar has been certified as a Sports Destination since 2006 thanks to a high quality and multidisciplinary sports offering concentrated in a single sports area in the town centre, surrounded by the hotel and shopping area and just 800 metres from the beach.

In 2010 the destination received the Family Tourism Destination seal of the Government of Catalonia.



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Lloret de Mar has redefined itself in recent years as an **urban beach tourist destination**.

"Urban beach" is a new coastal destination concept in which the natural attractions of sun and sand are complemented by a series of added values related to the area, such as its history, inhabitants, traditions, customs, cultural heritage and a wide-ranging offering in terms of leisure, tourism and services.



Lloret de Mar drew up its first Strategic Tourism Plan in 2010, a plan that brought together a decade of work focused on joint initiatives between the public authorities and the private sector, which began in 2003 with the creation of the “Lloret Turisme” tourism promotion body.

The plan is currently at the implementation stage with two key objectives, on the one hand, to opt for one of the Tourist Destination Reconversion Plans promoted by the Spanish government in partnership with the Government of Catalonia, designed to achieve the reconversion and comprehensive modernization of mature destinations of international standing and potential

On the other hand, to consolidate its strategic products urban beach, sports tourism and business tourism as a strategy for reducing the seasonal nature of tourism.

The first objective was achieved in March 2014 with the signing of the Pilot Plan Agreement for Lloret with the Government of Catalonia

The second one is in the process of execution designing new public policies and looking for new instruments that help them achieve this objective.

One of such instruments is this Urban Lab.

5 CONTEXT

An analysis was performed looking at Strengths, Weaknesses, Opportunities, Threats, (SWOT analysis) the team used this methodology and adjust the terminology to the following four groups. “CHALLENGES, PROBLEMS, UNIQUENESS and POTENTIALS”.

Based in this methodology the Urban Lab team identified several issues that were put together in a way that could be easily fit within the proposed groups.



5.1 IDENTIFIED MAJOR CHALLENGES

After looking at several documents facilitated by the local authorities, visiting the site, speaking with authorities and the population, the team identified the challenges, weaknesses and problems that endanger the long term sustainability of the present Lloret’s Model.

The team had as its main aim to look at the present situation and try to propose some options that could help the local authorities together with the private sector to achieve their objectives set in the concept Urban Beach.

Therefore, several questions were post within the team in order to try to identify the process to follow and the alternatives that were available.

- How to diversify the mono-culture tourism economy of the city?
- How to re-generate the emptying historical city center?
- How to integrate urban life and tourism, and avoid disturbance?
- How to foster the uniqueness, identity and touristic atmosphere of the city?
- How to improve the visual impression and landscaping - at city entrance, historic part, coast, and other important landmarks within the urban structure?
- How to develop a regional tourism concept and collaboration – “A Regional Destination”?

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- How to upgrade and stimulate changes of the hotels, to cope with the changes in tourism?
- How to prolong the short tourism season with new sectors?
- How to improve bad traffic connections?
- How to solve parking problems – walkable city, P&R, shuttles, and other mobility means?
- How to supply services and keep good maintenance 365/7?
- How to create a momentum of change?

These were some of the questions that would gear to focus of the analysis in order

5.2 MAJOR PROBLEMS

In order to comply with a more holistic view that was proposed by the team the mayor problems that were identified were distributed in several headings that facilitate its understanding.

Therefore, in the local economic model, the present touristic situation, the urban and social model, and the mobility network and system, sustainability and resources, Housing, Urban Services and Facilities and the most important Image and Perception, are elements that need to be seen more closely.

5.2.1 Economy

The beach and sun tourism model leads to a mono-structured economy, which is a highly vulnerable system, any global fluctuation in the economy, may affect the local income in Lloret.

Other economic activities not linked directly or indirectly to the touristic industry must be looked at if the mono economic base ought to be changed.

The seasonal fluctuations and the lack of activity in the winter represent wasted potentials. There is very little economic buffer capacity at this time.

The low price policy in the touristic offer have affected revenues and therefore stop and hold up public-private investment in the city. The city is somehow lacking of maintenance in their facilities due to this situation.

The low season in winter diminishes the job offer. Some of the seasonal workers migrate back “home” or to other regions and others stay, raising the unemployment quotes.

Therefore, the government subsidizes local employers, paying unemployment support to “seasonal workers”. This is a problem for the government finances that can be used in other social benefits rather than a subsidy which can be substituted with a different economic policy.

The city of Lloret has seen better times. The current touristic model is not up to date anymore, compared with other destinations; the economic income for the local population is now lower than years ago.

5.2.2 Touristic model

Tourism is the main economical income source for the local population, therefore the model is highly vulnerable to fluctuations, which depend, for example, on the global economy, or on image and marketing.

Further the mono structured touristic offer, focused on beach and sun tourism, exacerbates the weakness of the economic basis for the population.

Although the region has important landscape values and a high potential of touristic and recreational activities, other than sun and sand, that can take place all over the year. Nevertheless, Lloret’s image as a sun and beach destination, generates a seasonal imbalance of the tourism demand.

There is a huge difference between summer and winter hotel occupancy. Further prices are continuously falling, because of an all over strong competition in the touristic offer.

The decrease of the revenues, due to the low cost touristic offer, discourages investments to enhance facilities and services. Many hotels invest very little in maintenance, therefore, an all-over decadence can be observed.

Low price summer, beach and sun tourism, attracts many young people, willing to party, consume alcohol and ready to be involved in noisy activities all around the clock.

Such touristic activities are incompatible with the local lifestyle and have pulled many young families out of the city center into the urbanizations in the outskirts. Some streets in Lloret seem quite abandoned during the winter season. The focus on summer tourism has excluded them from urban daily life.

5.2.3 Urban and Social Model

The touristic segment addressed by the offer in Lloret is often not compatible with the daily life of local population.

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In Lloret we can observe a deep segregation between local inhabitants and tourists in summer. Families are leaving the center and moving to the outskirts, daily urban life in Lloret has also moved to malls and shopping plazas outside the city center.

Mostly elder people stay in the center. Some streets, mainly those where bars and discotheques boom in the summer, have almost no population in the winter.

The population density in the center is continuously diminishing. Some zones in have a very low population density.

Through the focus in summer tourism and the appropriation of foreign values, international franchises, symbols, signs, thus the local identity has been affected.

5.2.4 Mobility

Although the local government has been working on this issue, there is still some lack of public transport in urban areas.

Parking is a big issue for people living in the center, local inhabitants have to pay parking fees, since there are no free parking opportunities nearby. Tourist coaches in summer exacerbate the parking problem.

While in the low season, in winter, the city seems almost too quiet, in summer the streets are crowd and there are traffic congestions in the center, as well as at the entrances and ways out of Lloret.

The connectivity within the Region, including Girona, is quite weak. The traffic between Blanes and Tossa de Mar crosses through Lloret, aggravating the complicated traffic situation in summer.

The costal path, which has the potential to become a very important tourism attraction, but also an alternative connecting element, is discontinuous.

5.2.5 Sustainability and Resources

The current touristic model is unsustainable and it is coming to its limits in the middle term. The effects of unsustainability are already affecting local economy.

One of the obvious problems of the touristic and urban model is the high consumption of land and resources, the urban sprawl. There is a need to close

the cycles, for example through sustainable water management, energy efficiency and food production, in order to achieve sustainability.

An all over lack of investment in technologies for resources management and sustainability was detected in the region.

5.2.6 Housing

The whole city is characterized by imbalance: on one hand there is sprawl at the outskirts, while in the historical center, population decreases.

The center has become unattractive for young families, because of the lack of services and shop opportunities for every-day items, leaving many apartments abandoned or available for the only use of summer tourism.

The center is losing its culture and flavor.

As a result of the abandonment of the center, many buildings lack of maintenance and restoration.

5.2.7 Urban Services and Facilities

The seasonal imbalanced demand of services, heavy need in summer, little demand in winter, makes it very difficult to operate and maintain the city.

Services are tourism oriented but they are organized and built at expenses of the local population.

From the urban point of view, the overwhelming situation of the City Center in summer and the lack of activity in winter, leads to an inefficient city model. There are huge unexplored potentials in Lloret.

5.2.8 Image and Perception

The city has little urban green and the landscape design is mainly poor.

Neither the city entrances nor the main avenues have an attractive urban design. The city reflects a poor image in a first impression.

Further many façades and public spaces are either full with publicity or in decadence.

While in summer the crowd center is almost unlivable, in the winter the atmosphere of bleakness invades the city.

5.3 UNIQUENESS AND POTENTIALS

5.3.1 Location

Great location, it is centrally located between Barcelona and the French border linking by road to the rest of Europe.

Excellent base for exploring Costa Brava, Catalonia, Barcelona and the Pyrenees.

5.3.2 Facilities

Excellent hotel capacity during the season including five star hotels.

Sports and leisure facilities, and a well built up old town with mixed use programs: shops, dwellings and services.

Know-how, experience in handling big masses of tourists for more than 50 years.

5.3.3 Accessibility

Expansion of public transport

New highway link

Establish train to Blanes/Barcelona

Facilitate central underground parking/apply restrictions

5.3.4 Town appearance, town life

Urban design program for public spaces

Demolition/transformation of low quality or damaged buildings

Regulations for signs, lights and boards in old (historical) town

Encouraging new businesses in ground floor locations through zoning

Retrofitting and renewing dwellings in historic town

Make Old town more suitable for all like playgrounds, quiet zones, urban design and other additional elements in order to enhance the urban quality perception.

5.3.5 New businesses and workplaces

Attract commerce, offices, production, start-ups

New tourist activities local and regional (facilitated by tourist office)

Higher education, public programs, Tourism oriented educational programs local/regional/international.

Transformation of existing, vacant buildings into other programs

5.3.6 Culture and events

Festivals, art symposiums, happenings

Cheap rent and free floor space available

Centrally located

5.3.7 Natural resources

Recreational purposes:

Natural reserves, with great potential for universally designed hiking trails in the hills (also for bikes)

Nice and large seafront, an opportunity to extend the beach walk

New cycle routes

Economic purposes

5.4 SUMMARY

Complete dependency on touristic sector strength & weakness / thread

Lloret has many resources that aren't being use for its optimum potential.

It's location can make possible to have a more diverse economy and activities.

Floor space available makes possible to design, create and build a lot of new activities in many different directions.

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The population is one of its biggest resources, and measures should be taken to improve livability and diversify ways of life.

The natural surroundings should be considered as a background for sustainable development.

The experience and knowledge in the tourism segment could be having many more potential uses.



6 VISION 2040

A vision statement must be proposed in order to have all the population aware of the intentions and have their direct cooperation and participation in the process.

Such statement must be repeated constantly in every possible way until it become a common culture of the population.

Such statement must be accompanied with public policy and the implementation of several activities in different fronts that have to be linked by the common concept of the long term vision that is shared by the society.

The vision statement ought to translate the intentions of the public and private interests, therefore some concepts in that direction could be recommended.

Some general goals and visions in Rethinking the urban model in a general and long term view should be defined

Lloret de Mar as a socially inclusive, well planned, walkable, transit friendly and regenerative city that is economically vibrant and inclusive.



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Modifying tourist activities in a way that allows Lloret attract tourist with other interests than just sun and beach.

A city with a singular identity and a sense of place, re-inventing its own urban model to transform it not only as a tourism town but also as a quality residential town, conserving the patrimonial and historical heritage.

In its name could encompass some of the main aims that ought to be pursued.

Thus the city of Lloret de Mar should be **Livable**, **Leisure**, **Open**, **Resilient**, **Eco-smart**, **Town**, with **Diversity** of activities, **Economically vibrant**, and **Multi-cultural**, **Affordable** and equitable, **Regenerative city**.

7 URBAN AND LANDSCAPE PLANNING

Through urban and landscape planning it is possible to intervene in the urban fabric of Lloret de Mar by identifying and implementing strategic projects that will have a positive impact on the perception and the image of the city in both the short and interim terms.

After completing the analysis of the city, it was possible to define concrete actions that have the capacity to change the general image of the city for visitors as well as for residents.

Additionally, these actions will enhance the overall quality of life for all people yearlong and foster economic activity.

Today, Lloret's most acute problem is found in the city center. It is overwhelmed in the summer, abandoned in the winter and suffers from a lack of identity.

On the other hand, Lloret's most promising potential additional to the beach and waterfront, and the beautiful coast between Blanes and Tossa de Mar are



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the surrounding wooded landscape embedded with castles, forts, chapels and villas that represent the diverse chapters of history in the region.

In view of the potentials identified, amongst several possible actions Five strategic projects linked to specific activities were determined.

These projects have the objective of creating change for the residents and the tourists and represent “anchor” areas or seed projects within the city that will promote and attract additional development.

- Historic Center and Waterfront
- “Les Ramblas” of Lloret
- Entrances and main roads
- The Beach Trail
- “The Green Paradise”

7.1 KEY PROJECT 1

HISTORIC CENTRE AND WATERFRONT

The historic city center and the waterfront represent the most important tourist attractions in summer but are almost abandoned in winter. The waterfront and beach reflect an intrinsic beauty all year long. The city has an interesting urban structure with small plazas and narrow alleyways that directly connects to the coast.

7.1.1 Goals and objectives:

The proposal to revitalize these areas has to focus on raising the quality of life for the local population. The proposals will also attract winter and individual tourism.

The central goal is the regeneration of the historic center as the heart of Lloret, and to make it into a livable and people-friendly place for residents and tourists, through a comprehensive upgrade strategy.

Lloret has to redefine its image and discover the “Lloret Flavor”. It must take advantage of its virtues, landscape, history and traditions, but must also innovate towards becoming a sustainable and smart city.

The following objectives should be pursued in the short and interim term

1. Foster mixed-use with no mutual disturbance

The return of local residents to the city center is a major objective in order to maintain the city's liveliness all year.

Some actions to support this objective are

foster restoration of houses and apartments through financial and other incentives; focus on attracting young people like students and families

impulse the establishment of activities linked to art and culture; such as studios, art galleries, artisan workshops, and else.

encourage the establishment of commerce focused on the every-day needs of the local population

regulate noisy tourist areas through zoning and the modification of working hours of bars and restaurants

2. Attract residents, B&Bs and small hotels

In addition to attracting young people to the center through the restoration and new building of family and student apartments, a diversification of tourist attractions can be achieved by fostering the establishment of boutique hotels and B&Bs.

The Costa Brava, between Blanes and Tossa de Mar is a unique product that can be promoted through tourism year-round.

3. Upgrade public space

By upgrading public space, Lloret can renew and redefine its identity and become a unique sustainable city. The following strategies may be utilized to reach this objective

Foster the renovation of houses and facades and the construction of sustainable and iconic green buildings. Create momentum and implement incentives.

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Enhance public space and create new spaces in order to achieve a higher quality of life.

Consider the contribution of sustainable water management techniques for runoff water catchment, infiltration, rainwater harvesting and flood control as well as other strategies for the development of sustainable cities, such as edible species in urban landscapes.

Reconnect the waterfront to the city by eliminating visual obstacles and emphasizing the importance of the relationship between the beach and the urban area.

The restoration of open views to the sea is essential; no buildings, infrastructure, cars, signage or trees impeding visual access.

Improve environmental conditions through sustainable design in all interventions within the city.

Sustainability should become the trademark of Lloret. In order to attract families, it is important to avoid night-time noise, litter, bad odors from restaurants, or else.



Implementation of image guidelines and signage is a must in order to keep a sound image perception.

4. Walkability and being bicycle friendly

Within the sustainability strategy for Lloret regarding mobility, the pedestrian and the biker should be the priority.

The building of a well linked network of pedestrian corridors and bike lanes interconnecting the different areas of the city is crucial.

An accurate landscape proposal is also essential to enhance the functionality of the pedestrian and bike-path system.

This proposal must accommodate the Mediterranean climate by creating shade in the hot summer months and also must contribute to the environmental services of open space through water management and other strategies.

It is also must important to apply concepts of universal accessibility within the urban design.

5. Parking and accessibility

The lack of free parking options in the city center is one of the problems that people living there have to face. Additionally, many tourist buses shuttle to and from the hotels and need to park. To improve the parking conditions and accessibility in Lloret, the proposal considers.

Build underground parking in the central zone

Develop a parking system for buses

Consider offering free parking nearby the center for local inhabitants

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7.1.2 Actions and projects:

In order to achieve all proposed objectives, a comprehensive Master Plan for the city, with emphasis on the historic center, should be developed.

One of the main projects to enhance Lloret as a city for people and tourists is to upgrade and promote the Waterfront as an Iconic and unique area to be recognized, enjoyed and appreciated by residents and tourists.

Lloret's waterfront has to become the city's identifying symbol. In order for this to happen an intervention is needed which:

Defines, through a new urban planning and landscape architecture proposal, the "Lloret Flavor" and identity.

This project should consider closing the waterfront road and creating a wide pedestrian promenade.

Instead of having the majority of parking at the waterfront, cars must be moved and underground parking should be considered, taking also into account the parking needs of the population in the city center.

Improved permanent beach facilities for summer tourists that also provide an attraction for the local population and make the waterfront enjoyable in autumn and winter for local residents and visitors.

These facilities can also operate all year round and be suitable for music festivals; fairs; exhibitions; weekend markets and any other suitable waterfront open air activities.

Another important action is to give incentives to improve façades along the waterfront, thus taking advantage of the historical buildings (casas de los indios) as accents and landmarks.

The organization of an International Planning and Design Competition for the Waterfront, is an activity that could take place in the short term, which will not only contribute to finding the best solution for Lloret's coast line from an urban design perspective, but will also position the city with architects, landscape architects, urban designers, and other interested professionals, and contribute to defining its new identity.

Concrete actions to implement the competition are the following:

- Define the TOR (Terms of Reference) for the competition; teams must include an urban planner, architect, landscape architect, traffic engineer, environmentalist and economist.
- Nominate an integrated international and local jury.
- Define a budget and raise funds to pay participating firms and to cover jury and logistical expenses.
- Choose 5-7 leading international architectural firms.
- Set dates and execute the competition.
- Winner will prepare the plan.
- All entries will be presented in Barcelona and on the city's website as a marketing tool for Lloret.



7.2 KEY PROJECT 2 LAS RAMBLAS OF LLORET

The tradition of Ramblas in Cataluña has become a symbol of the pedestrian friendly city. These linear structures constitute corridors made for leisure and are accessible to everyone.

Lloret should follow the tradition and offer improved pedestrian and bike paths throughout the city.

7.2.1 Goals and objectives:

The principle goal of the implementation of a main axis through the city as a “Rambla” is to foster pedestrian and bike circulation, thus creating a major city boulevard that will connect the new commercial areas with the city entrance

Major emphasis should be given to the section starting in the present bus station and the sea (via Plaça de Pere Torrent and Biblioteca), welcome tourists and improve the poor urban design of this area.

The objectives of this project are to optimize pedestrian space, though broad walkways and vegetation for climatic comfort, and to contribute to managing



runoff water through rain gardens in order to prevent floods and work as part of the water cycle within the city.

7.2.2 Projects and actions

Hold an International Competition for the “Ramblas”, considering urban and landscape design, aspects of sustainability and water management and mobility and traffic planning.

Proposed alternatives



This competition can be linked to the competition for the restoration of the waterfront and will therefore imply the same concrete actions.



7.3 KEY PROJECT 3

CITY ENTRANCES AND MAIN ROADS

The poor urban design along the main road, the lack of identity and character and the succession of unattractive installations and stores illustrate Lloret's lack of identity and narrow focus on summer beach tourism. It is therefore urgent to intervene on Lloret's main road.

7.3.1 Goals and Objectives

This project has as a main objective to enhance the cityscape along the main road and mark entrances through urban and landscape design, making it possible for local inhabitants and tourists to identify Lloret as a unique city with its own character.

Redesign the two main entrances of the city as well as the main road, in order to improve the city's functionality and aesthetic, welcome tourists and create identity.

Take advantage of urban greenery to enhance heterogeneous cityscapes.

7.3.2 Projects and Actions

Prepare an urban design and landscape plan for the city's entrances and main road using vegetation as a principle design element to harmonize the cityscape and improve the urban climate.

Additionally, propose interventions that mark Lloret's entrances. And propose new establishments and installations along the main road.



The idea is to create an image of the entrances to Lloret much more attractive, which can reflect the spirit and flavor of the city



7.4 KEY PROJECT 4

THE BEACH TRAIL

The coast line between Blanes and Tossa de Mar has long beautiful beaches, hidden bays of soft sand, cliffs and unique cities; Blanes, Lloret and Tossa. The beach trail connects these landscape icons like the beads of a necklace and is therefore essential to the tourism of the region.

7.4.1 Goals and Objectives

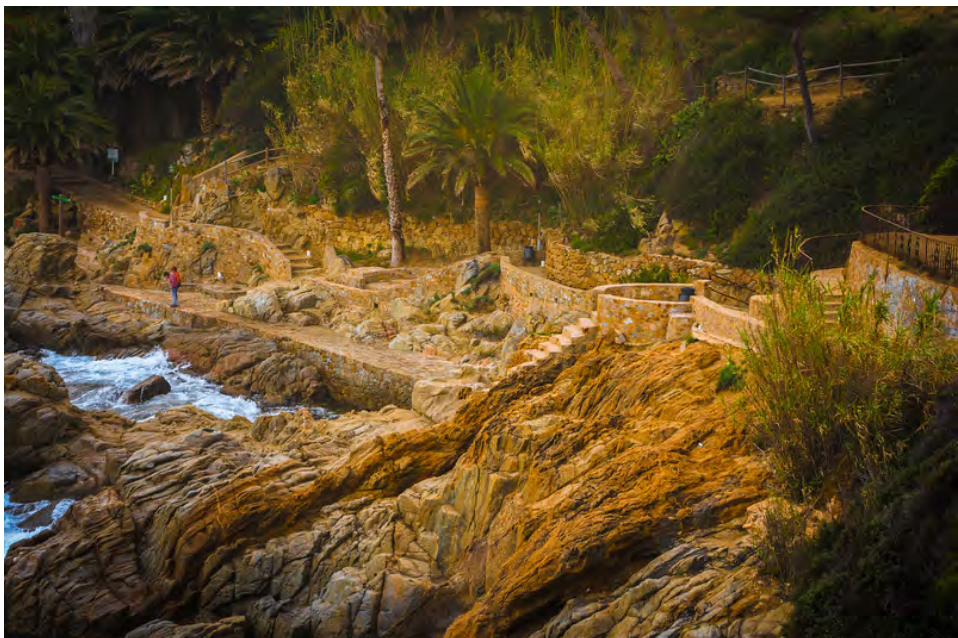
The main goal of this project focuses on utilizing the great potential of the trail to link the tourist region and promote its unique identity. Therefore it is



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fundamental to develop a first class walking and hiking trail along the wonderful coastline of Lloret that will connect the Costa Brava coastal trails.



Complete the missing sections of the trail.

7.4.2 Actions and Projects

Prepare a master plan which will include the path as well as possible activities and economic opportunities.

Understand and negotiate issues dealing with ownership in order to be able to complete the trail.

Design a landscape plan for the trail. And Develop a marketing strategy for tourism in the region with the trail as a linking element.

7.5 KEY PROJECT 5 "THE GREEN PARADISE"

Lloret is not only situated along the coast and surrounded by beautiful beaches and cliffs, it is also embedded with lush forests, which cover its hills and ravines.

The hilltops are scattered with ruins, castles, villas and landmarks that have been witness the history of the region.



Plan networks of trails linked to the coastal path, taking into account environmental protection measures, to prevent erosion and the endangerment of vegetation and wildlife.

Promote the forests and its available activities as part of Lloret's tourism. Produce hard copy and digital promotional material such as maps and pamphlets to facilitate the enjoyment of Lloret's natural setting.

7.6 SUMMARY OF INTERVENTIONS

	Theme	Short term actions
	General	A comprehensive master plan for the city
1	Historic Center and Waterfront	International Planning Competition for the waterfront and the Ramblas. Urban design plan for the historic center, preferably as part of the city's master plan.
2	"Les Ramblas" of Lloret	Competition for the urban design plan which includes the traffic and landscape design of the boulevard.
3	Entrances and main road	Urban design and landscape plan for the area. Propose different use of installations along the road.
4	The Beach Trail	Master plan including the path, possible activities and economic potential. Incorporate a Landscape plan for the trail.
5	"The Green Paradise"	Master plan for all open spaces in the greater Lloret municipal area; detailed design for trails and maintenance.

8 WATER RESOURCES

How to keep everything running safely and sufficiently and satisfying the environment, people and the businesses in relation to food and energy

The Blue Green Concept ought to be applied

8.1 BACKGROUND

Water resources in the Mediterranean region require special attention due to rain scarcity in the summer months, which coincides with increased water demand due to tourism as a major economic activity in many towns.

This situation not only represents a pressure to the existing water resources, but also to the functioning of the water infrastructure itself, having to serve up to 6 times larger population size in the tourist season.

Lloret started experiencing this already in the 1960's with the growing tourism, which triggered one of the fastest developments in Costa Brava. It was also one of the first municipalities to recognize the insufficiency of the water supply sources for the new conditions and started looking for other solutions

By the 1980 the water supply network was extended outside the municipal borders and it reached 16 km to the south, to the Tordera aquifer.

Difficulties such as overexploitation of ground water at low precipitation followed by intrusion of salt water and consequently lower water quality, required new upgrades of the water supply system

A desalinization plant opened in 2002 and wastewater recycling as a source for non-potable uses. Before May 2008, a simpler treatment system was applied to the secondary effluent in Lloret de Mar and reclaimed water was treated through chlorination and delivered directly to a nearby golf course.

After May 2008, the wastewater treatment plant (WWTP) adopted the traditional tertiary treatment that produces higher quality reclaimed water suitable for multiple non-potable uses.

Today Lloret is fulfilling all water needs from three sources: Tordera aquifer and desalination plant (potable water) accompanied with reclaimed water (for non-potable uses).

All sources have different energy demands and based on the climatic conditions the more economic ones are favored.

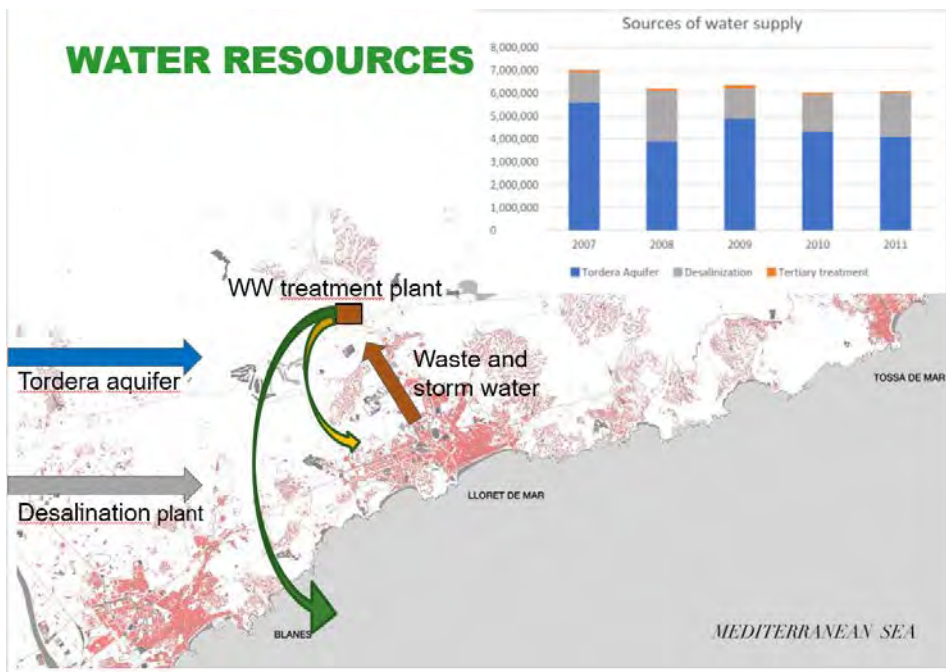
A study by Burns (2013) shows that the desalination requires around 6 times more energy than the supply from the Tordera Aquifer.

In addition, reclaimed water can significantly reduce the need for desalinated water and thus presents obvious advantages over using only desalinated water.

It should be mentioned though that it has limitations as well. Firstly, producing reclaimed water to meet water reuse legislative requirements can be costly.

Secondly, the water is reused for non-potable purposes, meaning that the existing water supply infrastructure cannot be used. Instead, new conveyance system was built to bring the water from the wastewater treatment plant to the city. Nevertheless, it is a solution that substantially helps the existing infrastructure to function in all conditions.

Based on the above, Lloret already made an important step towards integrated water management by adopting an approach that treats the generated wastewater as a resource and keeping it in the urban water cycle.



8.2 PROPOSED INTERVENTIONS

Within this report we propose further improvements/upgrades of the current systems as well as some sustainability strategies.

We propose to consider principles of closed loop systems including water, energy and food, within a circular economy concept with following impacts:

- Improve security (water, nutrients, food), while protecting the environment
- Tackle problems of seasonality for the infrastructure and for supplying resources;
- Diversify economy and offer new opportunities
- Turn Lloret to a Living Lab for sustainable touristic places in the Mediterranean.

Closed loop concepts for water and nutrients management are gaining interest and are recognized as pathway towards sustainable management of resources.

They facilitate the extraction of clean water, nutrients and energy from wastewater that on one hand can be used for greening the city and for urban food production; and on the other hand assist the existing infrastructure by reducing the waste load by turning 'waste' into useful products.

Lloret can apply such concepts at different spatial scales.

Regional scale, by tackling the agglomerations that are not yet connected to the sewer system

At the city scale, In addition to the existing water recycling scheme, there are possibilities for extracting nutrients from the wastewater and turning them into fertilizers for city's parks or urban food production.

Storm water management can be used as an opportunity for greening the city, saving energy, increasing biodiversity, creating amenity.

Within city, from household to neighborhood scale, by applying partial decentralization of the wastewater management, such as harvesting infiltrating and/or using rain water, or applying sustainable urban drainage (SuDS), separating (where possible), treating and reusing grey water, extracting nutrients from wastewater and reusing them for food production and similar operations linked to the system.

8.2.1 Regional Scale, and disconnected agglomerations

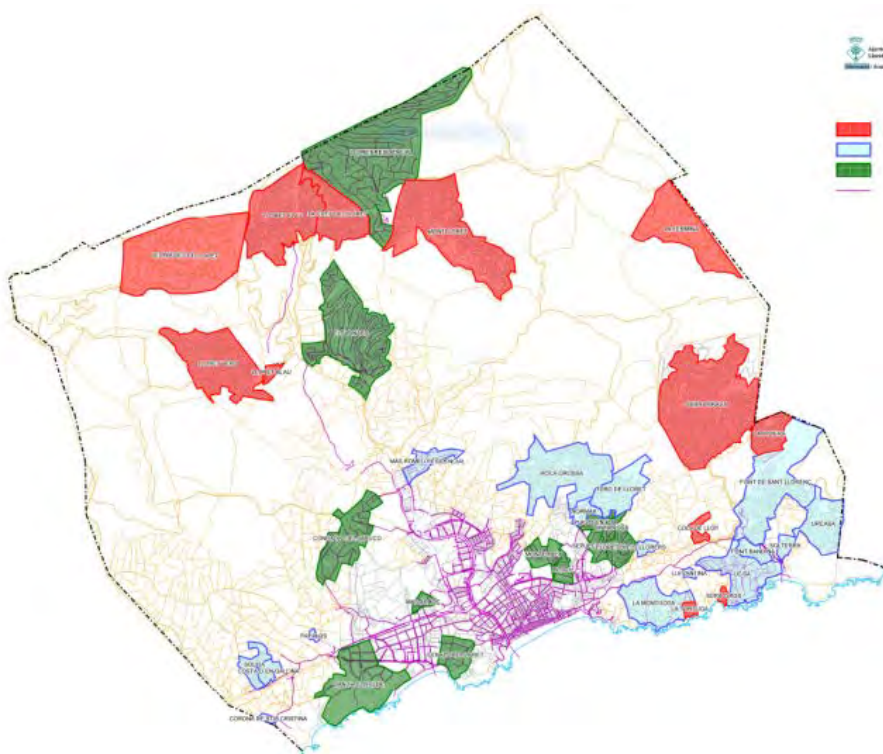
Between 1960 and 1991 Lloret experienced a rapid population growth, with significant urbanization along the coast and back up into the surrounding hills, creating several agglomerations around the city center.

While some of them have built sewers, which are connected to the central wastewater system there are still roughly 1500 inhabitants in the surrounding agglomerations that are managed locally, with septic tanks

There is a discussion on how to manage these agglomerations and one of the possible solutions is to build a sewer system in each one of them and connect it to the central sewer system of Lloret de Mar.

The figure shows agglomerations around Lloret de Mar: without sewer system (red), with sewer system, but not yet connected to the main collector of the Lloret de Mar system (green) and agglomerations connected to the main sewer system (blue).

The area is hilly, thus there will be a necessity of few pumping stations to pump some of the wastewater to the main collectors.



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Clearly there are three major disadvantages of such solution

It is one of the most expensive options, because only the sewer system, which is the most expensive part of the wastewater system will cost more than several small WWTPs

The wastewater will be transported and thus no opportunity for reuse of valuable resources of water and nutrients.

Additional load to the existing sewer system and the WWTP.

On the contrary decentralized systems, what we propose here, is much cheaper in terms of investment and also brings some additional benefits.

Another way to see wastewater is considering an agglomeration of 150 inhabitants which produces 8,200 m³ of water, 650 kg nitrogen and 270 kg of phosphorous per year, which can be used for growing food or turned into marketable product.

If the water is recycled for non-potable uses, it will release the pressure to the water supply system.

It is important to note is that small systems have better control on the sources of pollution, thus the treatment of wastewater can be cheaper.

Depending on the local conditions a small wastewater system can include biological wastewater treatment plant for single household or a system of small sewer collection network that takes the wastewater to small WWTP, such as: constructed wetland (CW), lagoon or classical activated sludge (AS) system (with dispersed or fixed biomass). The nature-based systems such as CW are passive and require less maintenance and energy, but need more space compared to compact AS systems.

Basically, the unconnected agglomerations can have their own systems with all mentioned benefits and avoid the additional loading of the existing wastewater system of Lloret de Mar.

8.2.2 City Scale

There are at least two urban water management measures that could bring further improvements to the existing water infrastructure and its water recycling scheme, from the sustainability and circular economy standpoint. The

improvements are proposed in relation to food production and energy saving perspectives.

Existing tertiary treatment at the WWTP can be accompanied with nutrients (nitrogen and phosphorous) recovery technologies in order to extract nutrients and turn them into various products.

Storm water can be managed with the Sustainable Urban Drainage System (SuDS) approach in order to create multiple benefits such as mitigate flooding in winter, recharge ground water, create amenity and increase biodiversity.

There are several technologies that could be applied for nutrient recovery at the central WWTP. At the moment the WWTP does not remove nutrients and unless they are recycled together with the reclaimed water back to the city (small portion) they end up in the sea.

Lloret is achieving the legal requirements regarding nutrients because the area of release is not sensitive to eutrophication. However, from sustainability and circular economy point of view nutrients are valuable resources and should be reused.

Best way is to turn them into valuable products, i.e. instead of discharging to explore possibilities for circular economy.

One option that could be considered is a microalgae technology. This technology can be used on the effluent of the existing WWTP. The algae would grow and uptake the nitrogen and phosphorous from the effluent. Then they are harvested as algae biomass and depending on their quality, used for various purposes: from fertilizers for food production to cosmetics. Fertilizers can be used back in the city in parks or for urban food production.

Apart from several separated storm sewer pipes, i.e. approximately 8% (Source: Lloret municipality), most of the storm water in Lloret is collected via mixed sewer system, i.e. same pipes for wastewater and storm water. Important elements of any mixed sewer system are



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combined sewer overflows (CSO), which have a function to overflow the excess water during wet weather conditions (storm events) in order to protect the WWTP from overloading.

The reasoning behind CSO is that the sewer system should be designed to retain (and convey to the WWTP) the first and most polluted flush after the rain event. Later on, as the runoff increases (becomes too much for the WWTP) and the water in the sewer becomes more diluted, it is 'safe' to discharge it (overflow it) to recipients.

Time has shown that CSOs are a big threat for the receiving water bodies. Many of them are not even retaining the first flush and during storm events the rainwater together with the wastewater in the sewer end up in the environment.

The Spanish legislation, RD 1290/2012, establishes a framework to limit the pollution of receiving water bodies by controlling runoff waters, which requires CSO monitoring.

Sewer flooding in urban areas is another threat of mixed sewer system. According to a hydraulic model by the Municipality of Lloret, there are few points in the city, where floods occurred the Figure shows the Hydraulic model of the Lloret de Mar sewer system, showing the flooding locations.



SuDS can mitigate both problems and create multifunctional infrastructure. It is a system for urban drainage that typically uses principles of infiltration, rain water harvesting, water detention on surface and in general retaining the rainwater where it falls by using as much as possible green infrastructure. Examples of SuDS include:

- Rain water harvesting, collecting water from roofs or other impervious surfaces
- Green roofs and green walls to reduce the peak runoff
- Bioretention systems such as rain gardens provide green spaces and infiltrate the runoff
- Infiltration trenches, soakaways provide controlled infiltration and recharge groundwater
- Swales, detention basins, wetlands slow down the runoff store it and treat it.
- Pervious pavements provide hard surface, while allowing rainwater to infiltrate in the soil or in an underground storage

SuDS provide four main categories of benefits: water quantity (e.g. flood protection, aquifers recharge), water quality (rain water is treated via infiltration, preventing negative impacts of CSOs), amenity (green spaces increase the quality of peoples' lives) and biodiversity (create better places for nature).





SuDS can be used almost anywhere: for new developments and also for retrofitting existing developments.

Lloret has plenty of opportunities to implement SuDS. Flooding spots for example identified previously, could be a very good location for designing SUDS and preventing flooding.

Flooding can also be prevented if the water is retained/infiltrated before reaching those points.

The Figure shows another opportunity, instead of the storm sewer passing by the trees an infiltration trench can be constructed to water the trees and other vegetation it would increase the green and infiltrate or retain the rain water.

The proposed project in this report named Key Project 2, 'Les Ramblas' can include rain gardens and collect and harvest large volumes of storm water.

Some EU countries are introducing the implementation of SuDS in their legislation. Two examples are UK and The Flood and Water Management Act, which encourages the use of SUDS. It will make its use compulsory on new developments and France, which recently decrees that new rooftops must be covered in plants or solar panels.

Given that many buildings in Lloret de Mar need reconstruction it makes a lot of sense that retrofitting is done in a way that includes sustainability principles like SuDS.

8.2.3 Within the city

There is a range of measures that can be undertaken at smaller scales in the city such as household, neighborhood, that can significantly contribute resource efficiency of the city.

Measures for decentralizing urban infrastructure are particularly suited for places like Lloret de Mar because of the seasonality in loads.

Sites like hotels, camping grounds and similar are overloading the existing sanitation system in summer on one hand, but on the other hand they represent an opportunity to ‘catch’ excessive nutrients and wastewater.

These measures can make touristic facilities more self-sufficient, they can ‘green’ their business model and thus increase their attractiveness for a different profile of visitors, more environmentally aware and offer these sites as educational and demonstration polygons.

As mentioned in the previous section many buildings, hotels in particular are deciding for renovation. The investment can be used in a ‘smart’ way, to make buildings and consequently the city more resilient and at the same time more attractive for the local population as well as for the tourists.

Investments in new house installations can support separation of wastewater sources: instead of just replacing the old pipes in a building a separation of grey water (showers, laundries, hand washing basins) from the toilet water (black water) can be considered.

This would bring numerous advantages: the grey water can be treated and reused for various uses like toilet flushing or irrigation, black water can be processed, so that we extract nutrients on-site or simply discharged to the existing sewer system.

As an example, let’s have a look at hotel Samba in Lloret de Mar.

Hotel Samba is a large 3 star resort with 441 air conditioned rooms, green areas and exterior pools, conference rooms, bar and restaurant.



Water use reported by the hotel ranges from 25,000 to 34,000 m³/year.

Interventions to reduce water consumption, such as grey water

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reuse for WCs, were undertaken in the past allowing reuse of 13,500 to 15,000 m³/year.

The hotel estimates the return period of the investment to be 4 years.

Further, the hotel is involved in projects that aim to improve the efficiency and add values to the recycling scheme.



Two pilot technologies are installed to treat the GW up to standards suitable for irrigation. A green wall technology can provide multiple functions: treating GW, amenity, biodiversity, and if placed suitably it can regulate temperatures indoors and save energy for cooling in summer.

In the Figure presents the green wall composed by ornamental plants at Samba hotel, installed by Alchemia-Nova GmbH (Austria), while Figure Xb presents a compact membrane bioreactor that takes much less space to treat the same amount of grey water.

8.3 URBAN FOOD PRODUCTION

Nutrients derived from wastewater as proposed previously can be directly converted to food and/or feed which when excreted at the place of production will again be used for food production one perfect cycle supporting jobs within this circular economy.



The city of Lloret is an excellent example of additional (seasonal) nutrients imports, which can be cached and turned into products.

Urban agriculture is generally recognized as an opportunity to accept 'waste' in form of fertilizers, provide fresh and local food and open a whole range of new jobs opportunities.



Studies around the world have shown that it is safe and feasible and can increase the sustainability of cities. Bohn and Viljoen (2011) have calculated that a city like London could produce about 30% of all fruit and vegetable requirements of its population from within the city boundary by only using currently abandoned, leftover space.

Urban agriculture can be introduced in the urban planning by creating productive urban landscapes

Food production can be practiced in a more technical/intensive way through hydroponic systems or aquaponics.

Both systems are growing plants in water (where plant nutrients are introduced), thus no soil is needed and is particularly suitable for urban environments.

water & nutrients



In the case of hydroponic systems nutrients are 'imported', while aquaponics use fish as nutrient 'provider'. aquaponics is a system composed of a fish tank (where nutrients come from) and a hydroponic part for the plants.

Compared to classical soil-based systems both, hydroponics and

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aquaponics use up to 10 times less water for the same amount of vegetables thanks to controlled environment and recycling of the water in the system.

As said, nutrients need to be provided to the hydroponic systems. A blend of macro (nitrogen, phosphorous and potassium) and micro nutrients (calcium, magnesium, sulphur, boron, cobalt, copper, iron, manganese, molybdenum and zinc) can be supplied in different ways.

What would be most sustainable is to process those blended fertilizers from local resources, such as wastewater, as proposed in the previous sections. In a whole value chain from raw material to food can be established.

Unlike hydroponics the plants in an aquaponics system receive their nutrients from fish and thus the whole system can function in a closed-loop way.

Of course, some imports are needed like fish feed, but in the context of circular economy the feed can be provided from local resources, such as algal biomass that is grown on wastewater (see previous sections).

Aquaponics are highly productive and compact systems that can be installed in a backyard, on rooftops or at industrial scale.

The productivity of aquaponics systems as reported by the Urban Farmers (Switzerland) is as follows.



An aquaponics system built on 15 m² with 2 m³ of water can produce 60 kg fish and 200 kg vegetables per year. A bigger scale system, 1000 m² and 50 m³ water produces 3.4 tons of fish and 20 tons of vegetables per year.

A small scale aquaponics fitted on a parking space in central London is presented in the figure.

Apart from significantly increasing the city's sustainability aquaponics and

hydroponic systems offer green jobs opportunities, not only related to the systems themselves but also in training and education.

8.4 ENERGY ASPECTS

Renewable energy sources such as solar-based systems can significantly improve the energy situation in the Mediterranean.

However in this report we would like to stress that installing such systems such as photovoltaics or solar systems for water heating, only makes sense in well-thought non energy-intensive urban infrastructure as proposed in the previous sections.

Energy savings can be achieved through optimized water management (drinking and wastewater) in relation to food production. This kind of management can achieve:

- avoiding the use of desalinated water, which is big energy consumer (Burns, 2013)
- passive storm water management (no pumps) with green infrastructure (if properly designed)
- reducing the need for air-conditioning of buildings with properly installed green infrastructure. In addition, properly designed green infrastructure can mitigate urban heat islands via evaporative cooling.
- Extracting nutrients from wastewater requires energy, however the food grown in the city can bring many benefits and impact the energy consumption of unsustainably produced food.



To conclude, energy efficiency can only be achieved in sustainable way if we consider at the same time the functioning of the water and food systems. Thus, cross-sectoral management of the resources can bring the desired benefits.

8.4.1 Solutions for resource efficiency in Lloret

We are proposing multifunctional blue-green concepts to

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simultaneously address the following issues:

- Improving the water security (quantity and quality) and water system operation as a whole:
- Regional scale: Treating the 1500 persons in agglomerations not connected to the sewer system in a decentralized approach
- City scale: use the storm water management as an opportunity for greening the city, saving energy, increasing biodiversity, creating amenity; recycle water (source separation systems) as much as possible!
- Increasing the local economy by producing more local food and being more energy efficient.



9 MOBILITY AND TRANSPORT

The component of Mobility and Transport of this report, seeks to show the main targets that were identified through the work undertaken by the professionals group of the Urban Lab.

In recent years, probably with more emphasis on the past decade, it has been a growing debate by distinguishing transportation issues to issues of mobility into urban and regional planning and management

At present it is recognized that the issues relating to mobility, refer to the movement of people and societies, such as forms, means and modes used in population displacements (and sometimes for freight) and the quality, the reasons and consequences. While transportation issues relate more to the ways and means transportation systems for example

While still, aspects of mobility and transport in territorial planning processes can be seen in multiple geographic scales, for purposes of the analysis in the Urban Lab for Lloret, vision on a regional scale (even on an international scale and Spain scale) was performed more in the perspective of Transportation, while in the urban and local levels (especially the downtown zone of the city) its vision was based more on urban (and Regional) Sustainable Mobility approaches.

The proposals made for urban and local scales try to support the territorial vision identified, both from the town hall, trade associations and civil society of Lloret, as built by professionals in the Urban Lab team contained in this report; especially in the areas of Economy and tourism, Urban planning and landscape and Urban Model to be rethought the city.

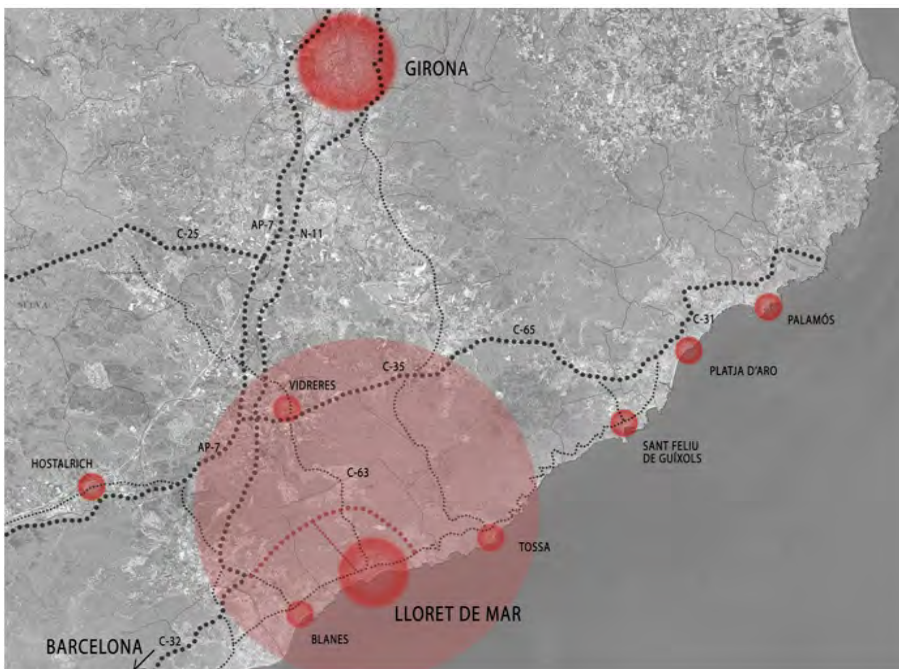


9.1 PLANNING AND CONNECTIVITY IN REGIONAL SCALE

The main purposes of this scale recommendations are to explore the advantage in increasing the connectivity of Lloret in Catalonia and Spain context, in order to facilitate and contribute to make viable changes in the urban-rural model, which is expected to achieve to promote a new pattern of tourism, better quality, more visitors and peak seasons duration in year.

The most important proposals are summarized as follows:

- Extend the Autovia C-32 improving the regional, sub regional and urban connectivity, both in its role as a as a beltway municipal, and regional vehicular traffic segregate decrease pressures on urban and local mobility in the city
- Extend the railway (Renfe or light rail) from Blanes to Lloret, (medium - long term period):
- Improve the commuting in public transportation all year, between Barcelona and Lloret (even Tosa too) to diversify and increase the tourists amount, both from Origen places, as broader tourism purposes, and contributing to diversify the economy and the connectivity of the Lloret residents



- Implement the route Lloret - Blanes allowing safer and more adequate circulation of inter-municipal buses, segregating an exclusive lane for its operation
- Connect Blanes and Lloret through bikeway and implant other alternatives closer to the beach
- Complete the beach trail that includes the implementation of recreational and tourist attributes: complementary services and specialised facilities (food and beverage stations, special areas to make recreational activities, etc)
- Improve the quality and quantity of public transport between Blanes-Lloret and Girona-Lloret: higher frequencies on bus schedules and to implement intermodal strategies (especially with bicycles) (Girona-Lloret)

The previous map shows the vision of connectivity on a regional scale that could be identified in a network perspective of cities (in the region) and as a node core of an influence area the urban territory of Lloret.

9.2 PLANNING AND CONNECTIVITY IN URBAN SCALE

In the urban scale that was defined for this exercise, the dimension of mobility incorporated two concepts to understand in the context of urban planning: accessibility and connectivity.

The aim of supporting the proposals in these two concepts is to ensure that the gaze emerged from the regional level, ensuring in the urban area connectivity from “top to bottom”, and in turn, promote accessibility in the different suburban areas in the Lloret zoning which is recognized.

The conceptual approach of urban model, from spatial planning as a mechanism to achieve this model, comes to recognize the presence of centralities into the urban land, which act as nodes of an interurban network that contributes to strengthening economic and spatial structure of city.

This approach aims to understand the urban territory of Lloret as a city with more diverse social, cultural and economic attributes, and potentially organized to expand its range of potential attributes on tourism, taking advantage of the configuration of some centralities which currently has the city.

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Likewise, such approach can reinforce those urban areas that due to their location and attributes, can act as nodes that promote an urban model less dependent on the attributes derived from tourism beach, concentrated in the downtown.

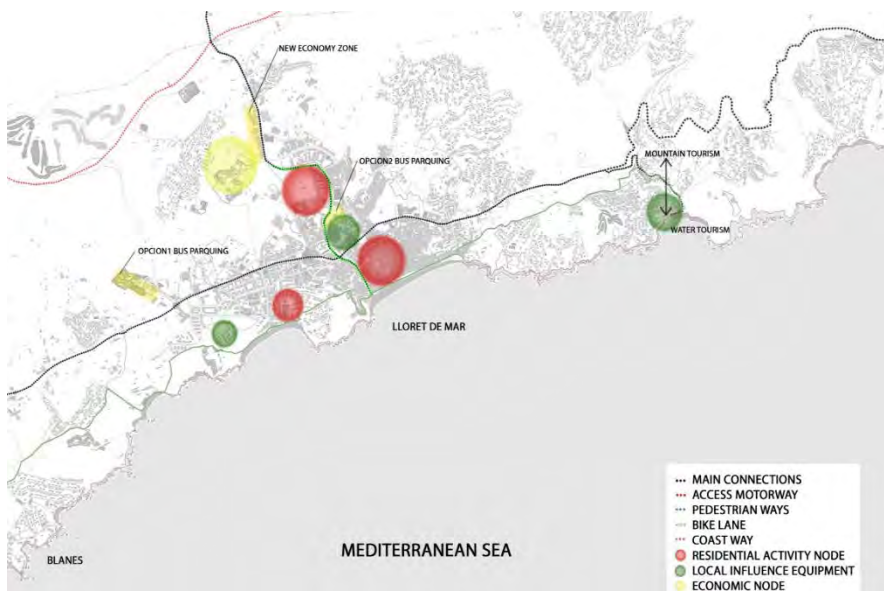
It is one way of implementing the concept of Urban Beach that Lloret has decided to instrument.

9.3 NODES

In this purpose, during the Urban Lab it was possible to identify six nodes, both now and in the future, may become established as an intra-urban driving centralities network as the foundation to the new urban model of Lloret. The map below shows their location

In addition, were identified two sub-nodes related to develop of bus parking during high season tourism, which can be understood as some small centralities that can reach induce the location of some activities that currently affect the mobility in city center.

A key aspect which was taken into account in the analyses and recommendations presented in this scale of planning is to ensure that the structure already existed as urban road links between nodes in the various proposed categories.



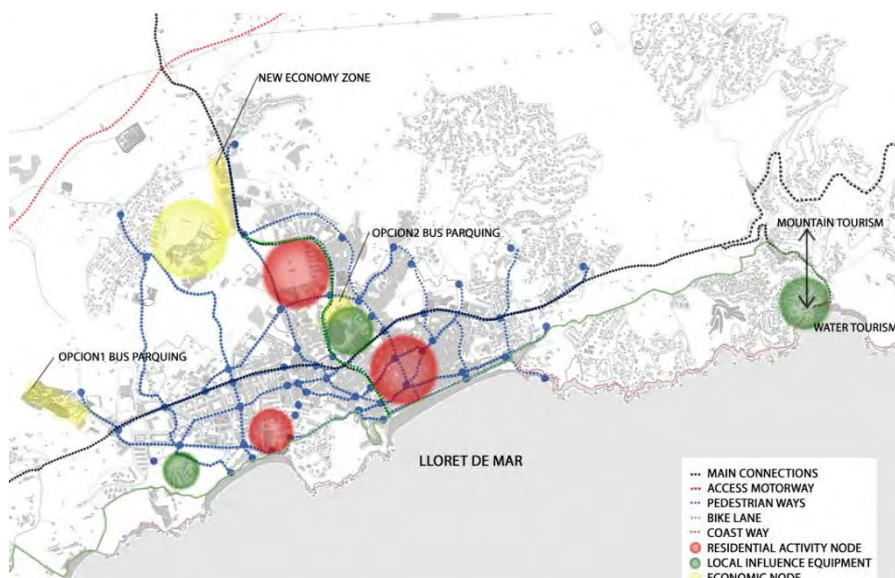
Such road structure, not only has been designed as a space connectivity for vehicle flows, but can become and has been taken into account, such as road space for other modes of transport like walking, bikes and public transport based on buses.

It can be seen in the maps presented below, that the proposal from the Rambla de Lloret is geared not only to the downtown area of the city, but considering its continuity towards new development areas for business and sports, or to areas at Fenals and Canyelles in Lloret urban ends.

As shown below, this urban structure also corresponds to the land strips arranged for pedestrian mobility, or the incorporation of trails or sidewalks parallel to urban streets traditionally with vehicular use.

The seven nodes or centralities are classified in three categories: Residential Activity Node, Local Influence Equipment and Economic Node, as shown in the maps below:

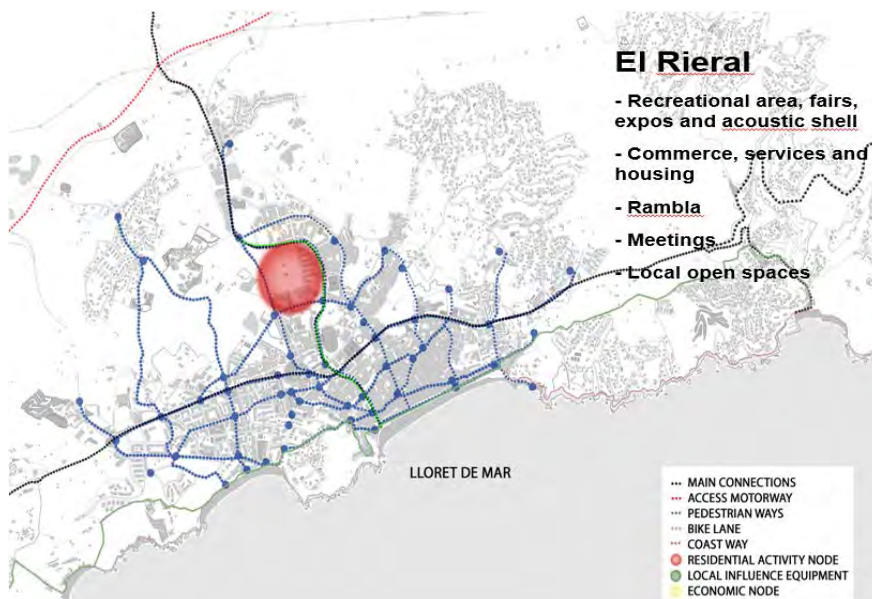
From these categories and recognition of the urban territory made during the Urban Lab, the following nodes were defined



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9.3.1 El Rieral Node

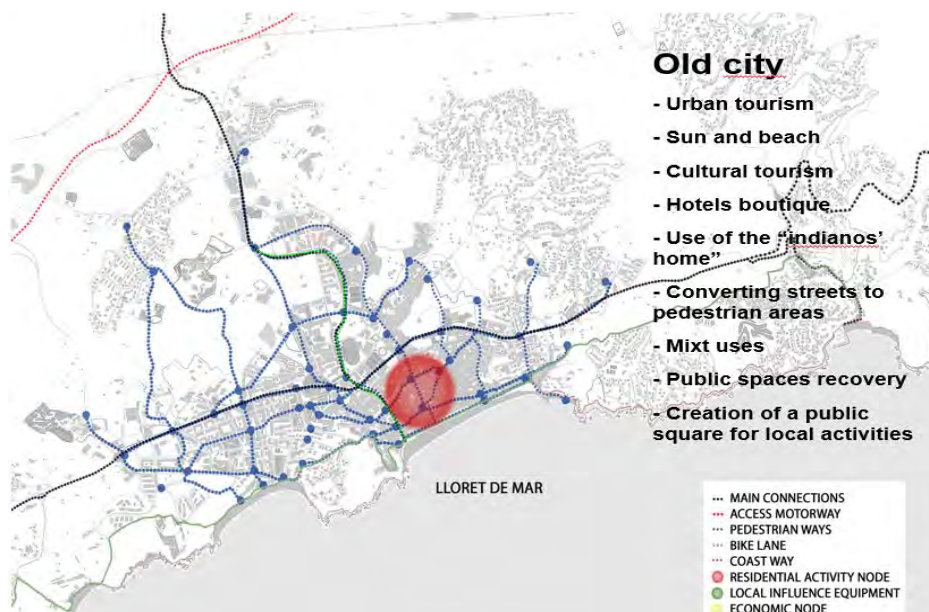
(Residential Activity Node), thought out as a predominant residential area consistent with activities associated with trade, services and leisure in zonal scale; it is also possible to reconcile this area with the completion of such activities fairs and exhibitions, and other activities that can take advantage of the spaces and facilities provided.



9.3.2 The Old City Node

(Residential Activity Node), currently the main node of tourism; can become a renewed centrality in the urban, economic and social, which seeks to transform opening up possibilities for the introduction of new tourist, commercial and cultural activities.

While beach tourism will continue focusing on the hotel and commercial development, it is intended that interventions such as pedestrianization of urban streets, traffic calming, and the expansion in the year of the tourist season, can activate new tourist activities and niches and therefore new activities and vocation center.



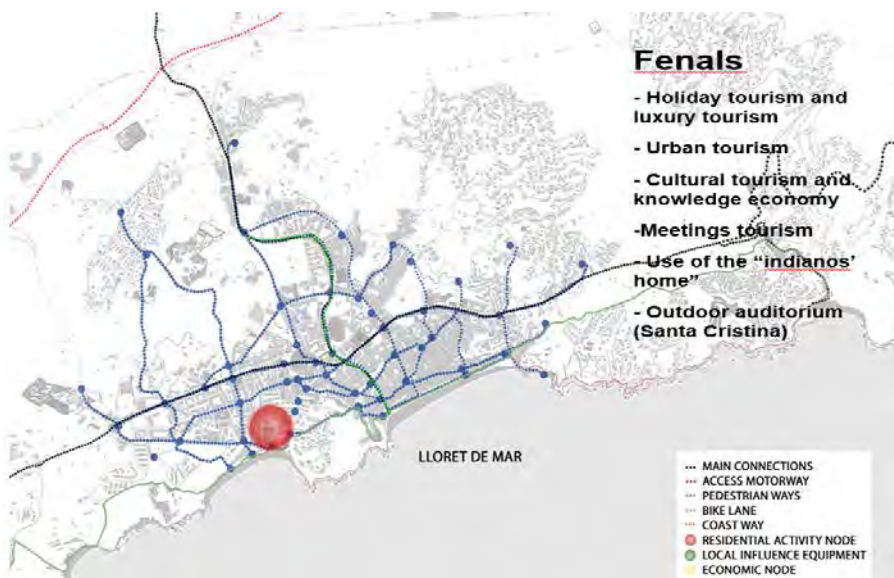
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9.3.3 Fenals Node

(Residential Activity Node), seeks to balance on the city model, as an urban centrality (and touristic area) the predominant influence of “economy beach”, which determines a type of visitors that restricts extend the tourist model of Lloret.

Current features of Fenals Area are an opportunity to reshape the hegemony of the economic activity of Lloret given its proximity to the Main Beach area, and conditions of a more selective tourism.

This area is appropriate to encourage visitors in cultural activities, restaurants and luxury services, use of “Indiano” houses, and condos development.

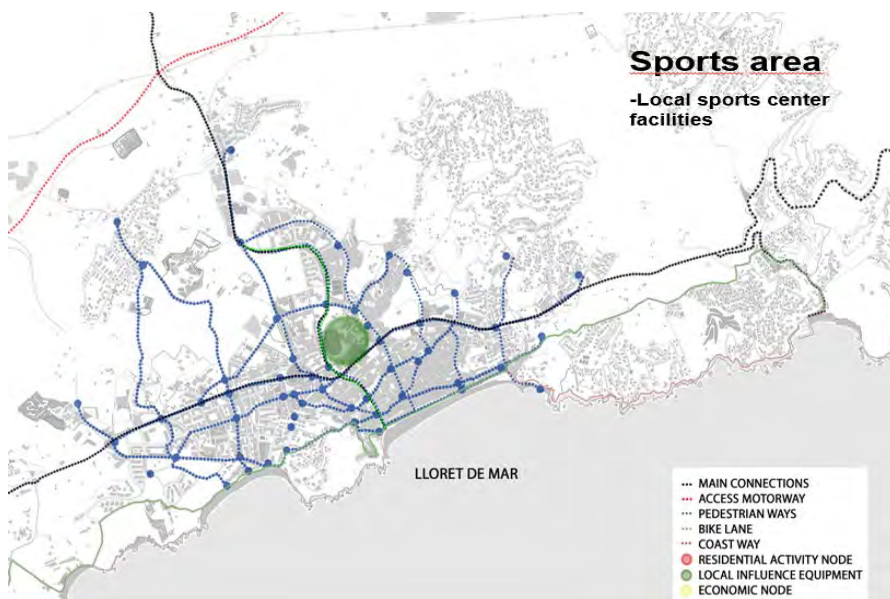


9.3.4 Sports Area Node

(Local Influence Facility), corresponds to a node that currently exists and plays an important urban function to group several of the most important sports facilities in Lloret, with nearby residential uses and local trade.

This node is expected to be consolidated, not only in the current function of urban planning, but as a node that promotes and multiply sporting activities in the context of tourism and urban economic development of larger scale.

This means that it is expected that this node progress towards implementation as an area that achieve more and more specialized type of visitors and more qualified tourists, taking advantage of the climate in the winter season in Europe, which undoubtedly facilitates sports practices elsewhere in Europe are limited by winter temperatures.

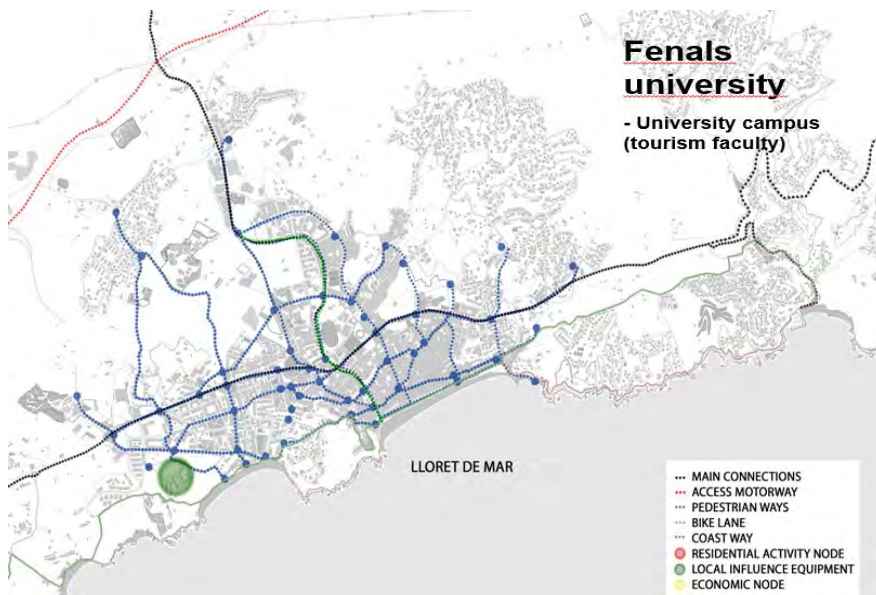


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9.3.5 Fenals University

(Local Influence Facility) is a node based on the provision of educational and training services, whose epicenter is the University.

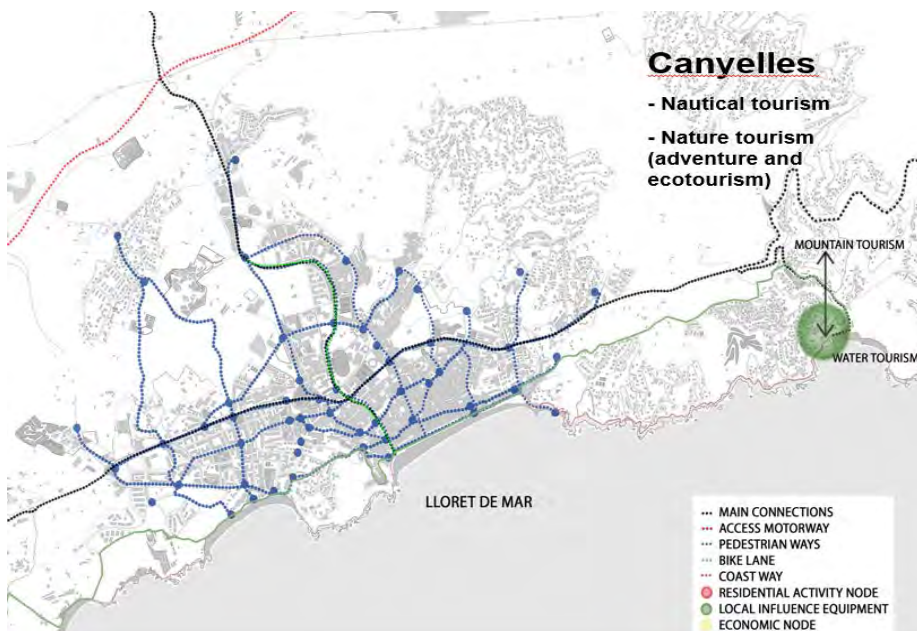
The possibility of securing a formal educational training based on teaching oriented tourism industry, not only promotes a grouping of specialized services, but also operates as an urban anchor project.



9.3.6 Canyelles node

(Local Influence Facility) seeks to exploit two major advantages that today presents this area of the city: the connection Sea - Mountain through the Port of Lloret, and spatially expand the area of economic influence of the city.

The purpose to impulse this zone is to get strengthen the natural and nautical tourism, with special interest in ecotourism, broadening thus, the target group of visitors during different seasons of year.



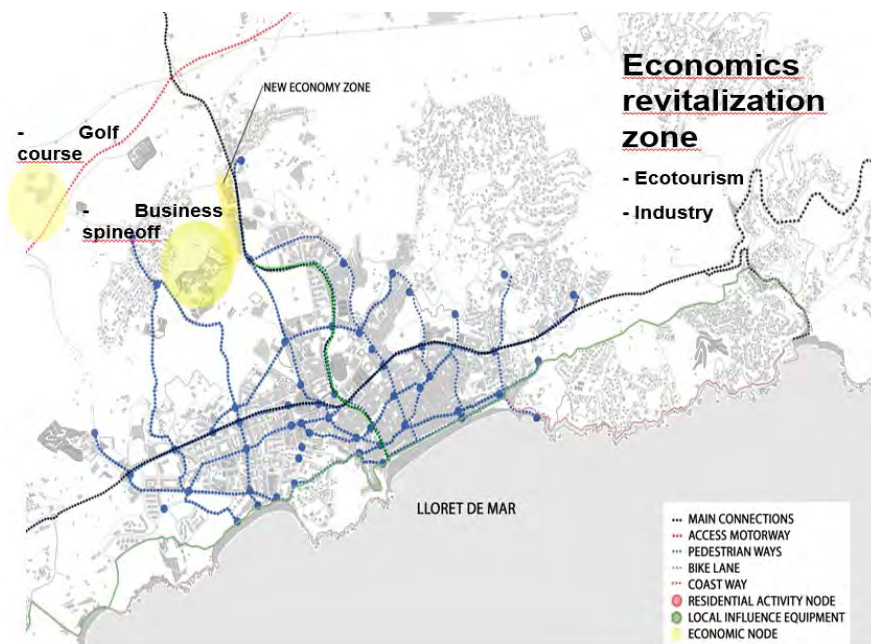
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9.3.7 Economic Revitalization

The last nodes correspond to urban strategic zones which main target is to revitalize and consolidate business and some kind of industry located in Lloret.

Currently, the New Economic Zone, called for this report (As it is shown on the map), has urban development based in industry and business, whose location on the urban scale and given the projection proposed by the Urban Lab model, operates as an opportunity to strengthen the economic diversification of the territory.

Close to there, it was identified an area that has the potential to become attractive for tourism supported by the establishment of clubs and resorts, which induces a type of specialized visitors, which are less dependent on weather stations.



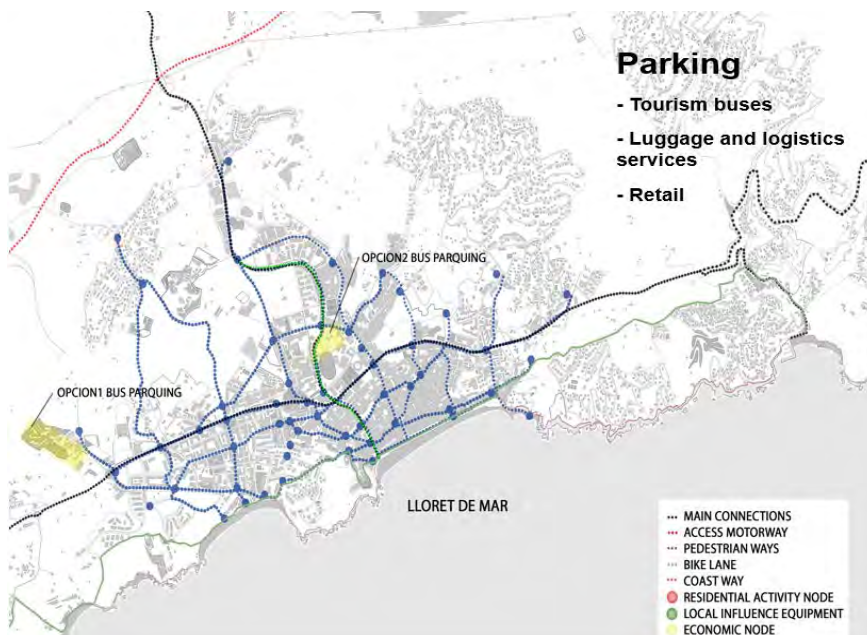
9.3.8 Parking Nodes

For bus parking propose into Mobility Strategy, it was proposed to develop an area, more than sub-node type, arranged for the logistics bus parking and ascent and descent of passengers, considering the high flow of visitors (most other European countries), and now they use the downtown area of the city at peak periods, with corresponding conflicts and congestion.

The main idea is expected to achieve the implementation of these parking areas, they can be described as follows:

Locate and implement parking zones, in PMUS context, especially for tourism buses and car tourist users; there are two options for parking buses, perhaps the best can be in the area of "Papalús" that connects to the extension leg of the C-32

Defining and specify logistics processes for baggage transfer and displacement of tourists from the future bus parking to the different sectors where the hotels are located in the city, especially the historic center.



9.3.10 Accessibility and Circulation Around Town Center

In order to ensure the downtown city transformation, as a main node of new Urban Model, it is necessary to go for a drastic transformation of mobility; which it must be supported with fundamental changes of roads and street uses, and traffic reduction of motorcycles and cars flows.

Thus It is necessary to advance, as a gradual process, to remove vehicular traffic from “Paseo Marítimo” and convert it into the most important pedestrian urban boulevard of Lloret

Convert the "Avenue Just Marlés" (La Riera) as a part of "Ramblas de Lloret" including traffic management through interventions such as re-design of urban street sections, control measures in public transport general traffic and schedules of loading and unloading urban cargo and logistics

Design, implement and manage an internal public transportation system, based on small vehicles (alternative energy electric carts and a public bike system, used and adjusted both in the high tourist season as all year for local residents

Enable peripheral parking near the historical center to discourage car use within the downtown



1. MOBILITAT A PEU

- ✓ Ampliar l'actual zona d'estar del centre urbà
- ✓ Millora i arranjament de voreres

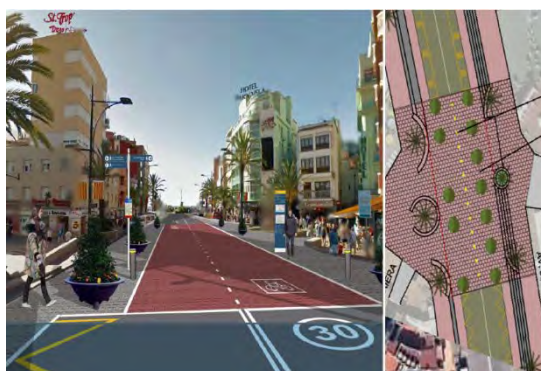


Management of existing parking located in the historical center to ensure permanent residents or users located in the historic downtown services

Evaluate the construction of underground car parking, either in the "Paseo Marítimo" or in nearby areas to ensure accessibility permanent of residents and users of commerce and services located in the historic center

Jointly management between the private tourism sector and the local government, regarding the schedules in loading and unloading of goods and assets required in the old center

Proposal for transforming the "Avenue Just Marlés" (La Riera) as pedestrian route (does not match the proposal to make Rambla)



9.3.11 Synthesis of Proposals

It is necessary to create spaces for building collective agreements by the participation of all stakeholders in the transformation of Lloret, in order to produce a New Urban Model.

This urban model must become an expression, sectorial and territorial, of the Lloret Transformation, most appropriate for encourage and improvement the tourist economy therefore the target of Lloret de Mar as a tourism destiny.

From this point of view, as a result of Urban Lab, the inclusion of public, social and other actors are part of the elements that will give greater opportunities to materialize the required transformations.

Therefore, the public policy, economic and social commitment must point to understand that **to change the Tourism model implies changing the territorial model on it different geographical scales**

It is too difficult to change the tourism pattern and extend the high volume level of visitors during year if the territorial model maintains the same logic.

The collective objective which was recognized for all stakeholders (public, private and social agents) during Urban Lab, suggests that there is a collective desire to contribute in a territorial model capable of managing change of Lloret.

For changing the territorial model, it is necessary to change the mobility paradigm to sustainable mobility

In this structural aspect the Municipality of Lloret has been making great strides, one that needs to be pointed out into public action of the City and the collectivity, is its proposal for Urban Mobility Plan (Sustainable) that is already formulated.

Some aspects of transport require the support of local and regional governments.

Sustainable urban mobility is the basis of the paradigm shift to energy efficiency, less pollution, more human scale

However, to achieve a paradigm shift in mobility, a change of territorial paradigm is required.

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To this end, public and collective action must understand and work for: to achieve a paradigm shift in mobility, a change of territorial paradigm is required.

For this, the collective action must be, A Policy Transformation, a shift towards solidarity and inclusive civic culture, A cultural change as an opportunity.

10 ECONOMY AND TOURISM

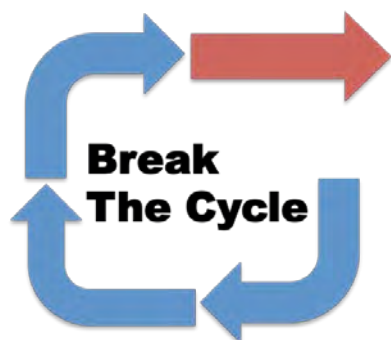
Once that a general vision for the next 20-30 yrs of Lloret has been defined together with all stakeholders, its implementation must be based in a congruent set of activities that ought to be operated in the different areas of interest and they should be executed in parallel in order to get a sounder result. There must be congruence in all activities proposed in order to fulfill a common ideas defined by the Vision.

It is clear that Tourism will remain dominating economic sector for years to come nevertheless this industry needs adjustment to the new demands of the new tourism and must be also congruent with the vision defined for the city

Is not arguable that dependency on just one activity puts the economic structure of the city in a very vulnerable position thus Diversification is inevitable

A goal for Lloret should be to increase economic resilience and reducing reliance on one vulnerable economic sector such as the tourism industry.

Therefore, one of the areas in which attention must be set is in the determination of additional economic activities that are not dependent directly or indirectly in the touristic activities.



Consequently, try to generate a steady economic flow along the whole year in order to reduce seasonability in the local economy.

The main idea should be to break the present cycle in order to create a more positive cycle that benefits all the interests along the whole year.

Major lines of action

- Define new economic activities additional to tourism
- Balancing interests of residents and visitors
- Escaping the vicious cycle of competition via low prices
- Compete via diversification, quality and service
- Expanding the season in spring and fall

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10.1.1 Hotels and businesses

Upgrading Hotels and Tourism Businesses, Renovation or replacement of downgraded hotels – common interest of all the tourism sector as well as public sector. Incentives for activities.

10.1.2 Image

The perception of the general public, that is mainly residents and certainly visitors must be clarified and congruent with the demands of the residents and with the touristic niches that have been chosen.

An intensive program on image and perception via media, marketing and urban works is advisable

10.1.3 Education and training co-operations

Propose the creation of a tourism faculty via the University of Girona that will work as a knowledge center. A research facility in the present and future touristic trends and their relation with the local touristic assets.

To serve as a training camp in the field using the local already established facilities such as hotels and restaurants in order to train the newly graduated or in the process of in the field.

Examples of this are in several parts of the planet, an example of possible cooperation is in Austria via the MODUL University in Vienna. (<https://www.modul.ac.at/>) is widely considered as Austria's leading international private university and is owned by the Vienna Chamber of Commerce and Industry, the largest provider of private education in Austria. (Co-operation with City of Vienna, Austrian Government, Private Sector, highly successful in international research.)

Another of the various alternatives is the Imc / University of Applied Sciences, FH Krems, <http://www.fh-krems.ac.at/en/research/business/tourismfactory/>

10.1.4 Sports and health

Add specialized health facilities to the extensive sports options such as a sports medicine clinic as a possible private investment

Provide facilities of trainers and coaches that are experts in different sport specialties in order to take advantage of the present and future facilities that will be provided in the area.

Mixed uses and enabling houses like boutique hotels



- Golf
- Hiking and Biking
- Culinary Tourism
- Painting, ... Arts
- Health tourism

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- Events, Festivals, ...

There is the Need for appropriate facilities that can operate on a commercial basis (golf course, club-house, quality-hotel, ev. apartments). Existing offers on regional scale (PGA Catalunya resort, Llavaneras) – to be complemented

At the present time there is the possibility to implement Some activities that are ready to be

developed in a more periodic and structured form ., these activities ought to be part of a more comprehensive plan that should be included within the general idea endorsed by the future vision

- Festivals of any type that generate the flow of interested people to the site.
- Special food festival (local food, seafood, “international events” agreements with the broadcast programs such as Master chef to be produced in Lloret and present some local food dishes ...)
- Music-Theater-Cinema-festivals, (making use of the existing infrastructure; discos, theatre, congress centre, ...)
- Opera / Classic Music (Open Air) in spring
- Electronic Music / City of Lights in autumn or winter so as to attract lovers of such music and use the present facilities that are not used during the low season.

10.1.6 Thematic streets:

An important asset that is already there in the historic center are its present urban structure that considering the mixed use policy and pedestrianization.

The area could reconfirm the urban tissue into a mixed use of several activities allowing some type of thematic streets using the street level or even the first floors of the present buildings in order to generate some thematic activity.

- art galleries
- bookstores
- Internet cafes

- [illegible]

As part of the more general vision of Lloret, certainly the Smart City concept should be taken into consideration related with several activities of the city

- Habitat Professionals Forum

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As Lloret de Mar has an outstanding position in the tourism sector it has the potential to be one on the leading “Tourism Smart Cities” and by that be part of international networks of excellence on future technologies.

Get permanent feedback and get in contact with people in everyday situations

Make Lloret a seamless, safe and impactful experience for residents and visitors



10.1.8 Living lab:

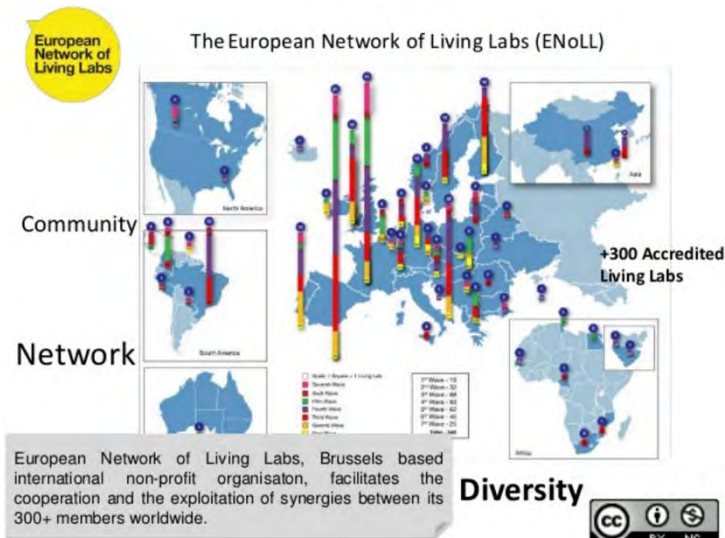
One of the benefits of being of the size of Lloret is that the participation of the local population can conform a program of such as Citizens in Lloret as the center of innovation

Lloret can be part of the European network of living labs ENoLL

A living lab is a research concept. A living lab is a user-centred, open-innovation ecosystem, often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes within a public-private-people partnership.

The concept is based on a systematic user co-creation approach integrating research and innovation processes.

These are integrated through the co-creation, exploration, experimentation and evaluation of innovative ideas, scenarios, concepts and related technological artefacts in real life use cases.



Such use cases involve user communities, not only as observed subjects but also as a source of creation.

This approach allows all involved stakeholders to concurrently consider both the global performance of a product or service and its potential adoption by users.

10.1.9 Fairground:

Lloret offers the possibility of providing outstanding suitability for small and medium sized fairs considering the size of its available accommodation facilities and the large experience in its labor in operating for big groups of people

Therefore, cooperation agreements with international operators such as Fira Barcelona or Messe Frankfurt could provide big demand for the use of the existing facilities in hotels and night life that is sometimes searched by big fair and expo operators.

The actual fair grounds could be solved with the selection of free area where temporal structures like modern tents could be



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set and with that serve the possible expo with some 30,000 to 50,000 m2 close to the city center

10.1.10 Indiano houses:

Support and attract young (local) artists for mutual benefit

Initiator and source for starting renovation of houses and appartements in old town

Self-sustaining program after initial investment

Potential for international expansion

Indiano houses to promote art related spaces: scholarships for students and apprentices which will integrate painter who subsidize their work.

Lloret could replicate the “Cau Ferrat” initiative and follow in Catalunya the same example of young artists and their possible developments.



10.1.11 Economic zones:

Redefinition of the existing economy zones

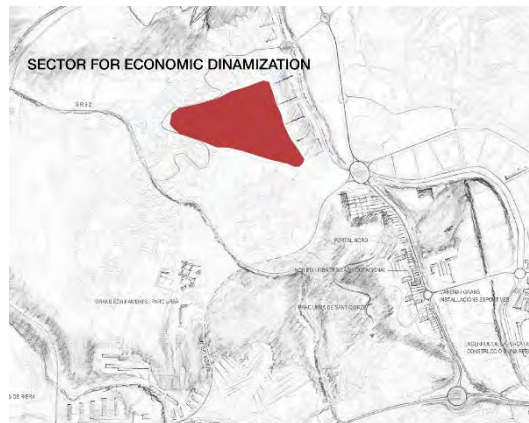
Securing and preparing proposals for new economy zones

Generate and secure space for

SME / PYMES

Start-Up companies

Spin-Offs



10.1.12 Tourist Segments

Reviewing the possible new segments of the touristic industry in the table its defined several of the possibilities organized according to category, characteristics, and segment in which they are defined.

Also in the table there are indication of the level of importance of the sector. The sectors proposed are operations that can start immediately according to their category.

Category	Characteristics	Segments
Strategic	innovative High potential in the coming years, as it has resources and can generate great economic benefit	Cultural Tourism: historical, culinary heritage.
		Nature Tourism: ecotourism and adventure.
		Sports High performance facilities

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		Incentives and conventions at the mid high end
		Urban Tourism, Local landmarks and shopping
		Marinas, sailing and Sport fishing
Sub strategic	Potential development requires additional investments. And marketing	Sport Tourism: golf
		Rural Tourism
		Holiday Tourism: shopping and game
Mature Sector	Of great importance to the site, subject to competition	Sun and Beach Tourism

10.1.13 Local activities in public squares

The location of the Lloret beach and the urban space left in the corner of the Lloret Rambal and the Pasaig Maritim develop additional services and facilities for open air activities such as

- Cinema
- Concerts
- Open air Fairs and Expositions
- Music and art Festivals



The recovery of the municipal market and follow the example of the Mercado San Miguel in Madrid or the Mercado del Borne in Barcelona will help to develop that historic area of Lloret



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10.1.15 Floating pool

Meanwhile there are several places in the world where there are (solar) heated pools within a bigger waterbody – as some people might prefer the „controlled environment“, water quality can be checked permanently and – last but not least – it is an opportunity to extend the swimming season.

It will not work to install a „standard pool“ in the sea in front of Lloret, due to the fact that the sea can be very rough there and would destroy such a structure quickly.

Anyway, this might be a challenge for inventors and engineers to find a possibility to have a heated pool in the sea in Lloret.



11 STRATEGIC PROJECTS

The following table presents a synthesis of the projects proposed in this document and the possible timing for development

Project	Term		
	Short	Mid	Long
Historic Center and Waterfront	X	X	
International Planning, Design and Competition for the Waterfront	X		
“Les Rambles” of Lloret	X	X	
City entrances and main roads	X	x	
The beach trail	X	X	
The green paradises		X	X
Extended the railway from Blanes and Lloret		X	x
Implement the route Lloret- Blanes intermunicipal buses.	X		
Connect Blanes and Lloret through bikeway	X		
Complete the beach trail that includes the implementation of recreational and tourist attributes		X	
Improve the quality and quantity of public transport between Blanes- Lloret and Gyrone- Lloret	X	X	X
Public Square for the local activities	X		
Public space recovery	X	x	
Use of the “Indianos houses”		X	
Hotels boutique		X	
Outdoor auditorium (Santa Cristina)	X		
Fenals University			X
Bus parking (tourism buses)	X		
Paseo del Mar.- pacification and reduction of private transport	X		

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New underground parking for local inhabitants		X	
Festivals through the year	X		
Special food festivals	X		
Music- theater- cinema	X		
Thematic Street (culture, handcrafts and commerce, dinner and bar).	X	X	X
Smart city Lloret de Mar	X	X	
Living lab	X		
Citizens in Lloret as the centre of innovations	X		
European Network of living labs ENOLL.	X		
Municipal Market Recovery	X		

12 THE URBAN LAB TEAM

THANKS TO LLORET DE MAR and HPF for the opportunity to work together in an extremely interesting and intense way



The following experts were involved in the HPF Urban Lab in Lloret de Mar during the intense work that took place in Lloret facilities in the Field Mission and afterwards in the review and editing of this report.

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Livable,

Leisure,

Open,

Resilient,

Eco-Smart,

Town

Diversity of activities,

Economically vibrant

Multi cultural,

Affordable and equitable,

Regenerative city