Development strategy proposition

Šibenik brownfield urban regeneration

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ARUP

Report prepared in collaboration with:

This document includes the opinions of Arup and the team, for the sole purpose of making development proposal for Batižele site in Šibenik. Therefore, the use of this documentation is limited exclusively to this purpose and to none other. The use of these works outside this described scope, will not be responsibility neither total nor partial on the part of EBRD nor of Arup. None of the contents of this report confers or pretends to confer any benefit or the right to claim to third parties.

The work developed is informed by the data collected during the Analysis and diagnosis which was based on available information. The sources used include public sources, regulations and current legislation, Arup previous projects, documents provided by the City of Šibenik and BDO and information obtained from meetings with the City council. We understand that the degree of detail and knowledge acquired is sufficient for the development of the tasks commissioned “Šibenik brownfield urban regeneration”. When it has been possible, the information provided has been validated and if it has not been possible, it has been contrasted with alternative sources and/or previous experiences.

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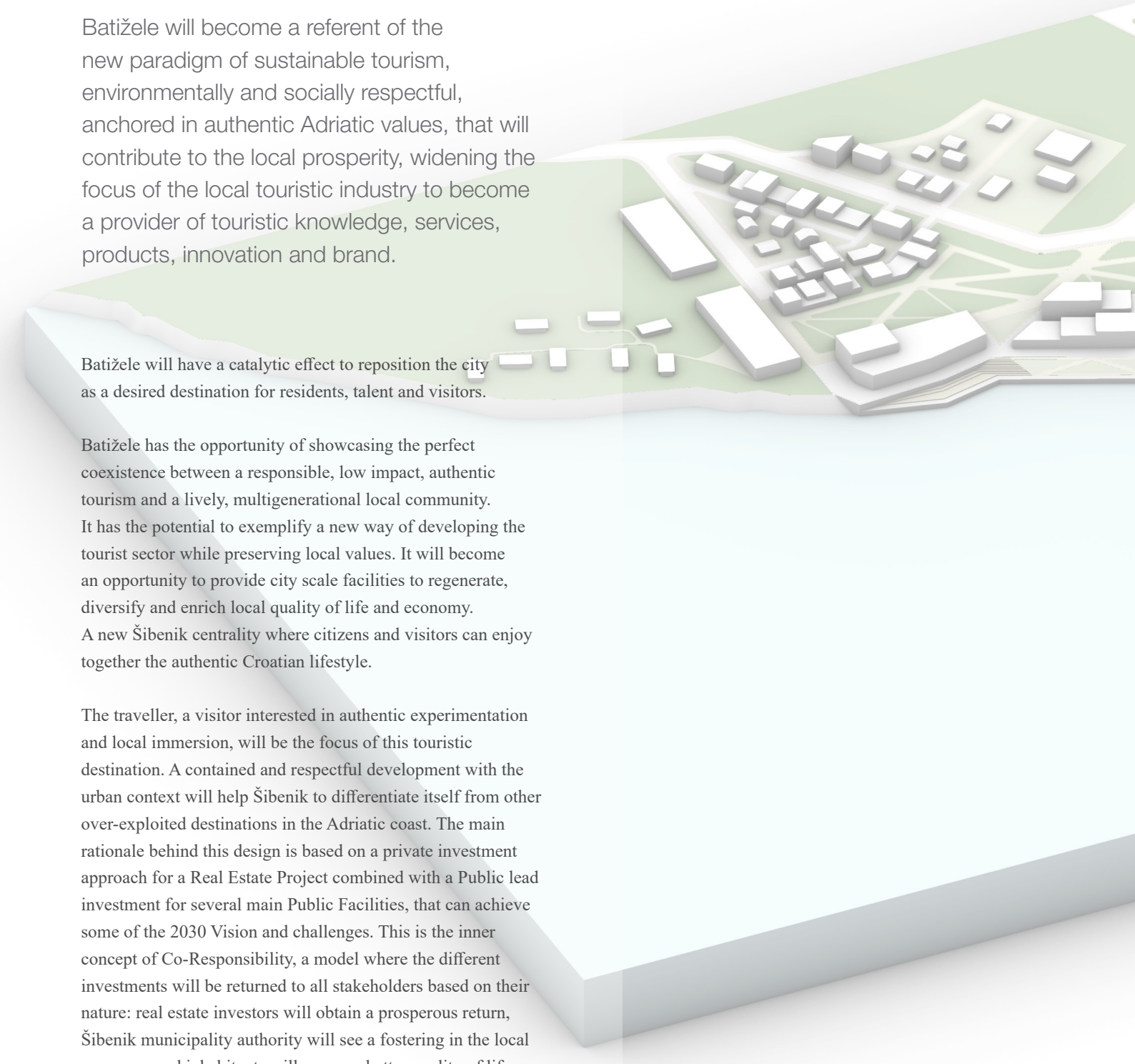
Contents

Vision

Vision

Batižele will become a referent of the new paradigm of sustainable tourism, environmentally and socially respectful, anchored in authentic Adriatic values, that will contribute to the local prosperity, widening the focus of the local touristic industry to become a provider of touristic knowledge, services, products, innovation and brand.



Batižele will have a catalytic effect to reposition the city as a desired destination for residents, talent and visitors.

Batižele has the opportunity of showcasing the perfect coexistence between a responsible, low impact, authentic tourism and a lively, multigenerational local community. It has the potential to exemplify a new way of developing the tourist sector while preserving local values. It will become an opportunity to provide city scale facilities to regenerate, diversify and enrich local quality of life and economy. A new Šibenik centrality where citizens and visitors can enjoy together the authentic Croatian lifestyle.

The traveller, a visitor interested in authentic experimentation and local immersion, will be the focus of this touristic destination. A contained and respectful development with the urban context will help Šibenik to differentiate itself from other over-exploited destinations in the Adriatic coast. The main rationale behind this design is based on a private investment approach for a Real Estate Project combined with a Public lead investment for several main Public Facilities, that can achieve some of the 2030 Vision and challenges. This is the inner concept of Co-Responsibility, a model where the different investments will be returned to all stakeholders based on their nature: real estate investors will obtain a prosperous return, Šibenik municipality authority will see a fostering in the local economy, and inhabitants will access a better quality of life, and new entrepreneurial opportunities.

VISION

Strategic objectives

Batižele will generate long-term benefits for the city. It is envisioned that this project will contribute to strengthen the reputation of the city in the touristic industry through the development of the hotel sector and high quality facilities, which will coexist with the local population, generating a unique social, cultural and economic ecosystem.

The development of this brand will require the prioritization of high-quality projects that stand-out not only because of their design, but also because of their contribution to the city. It will require some investment in place-making strategies and marketing. And it will inevitably depend on the public leadership to attract the right type of investors and key differentiating facilities to this particular location. The City of Šibenik has a very important role to play to make this a truly meaningful project for the city.

The vision for Batižele will be made possible through a development proposal, a mix of uses and activities that will be conducive of the responsible touristic model of which this project will become an example. But this ambitious project goes beyond real estate development: it involves the creation of city, not only through the creation of a quality public space for residents, but also because it will contribute to economic diversification, job creation and the attraction and retention of highly qualified professionals.

TOURISTIC REFERENT

Batižele will become a referent of the new touristic paradigm based on authentic experimentation and local immersion, geared towards THE TRAVELLER. An environmentally and socially respectful tourism that enhances the local culture and atmosphere and contributes to the community's wealth.

ECONOMIC DIVERSIFICATION

Batižele will contribute to diversify the touristic offering to "de-seasonalize" and spatially "de-concentrate" the demand. It will also contribute to transforming Šibenik's tourism industry by focusing it on health tourism. In turn, this will allow economic diversification and the reduction of the city's demographic gap by attracting young and qualified professionals from the health sector.

TALENT ATTRACTION

The economic diversification associated with the regeneration of Batižele will translate into the creation of new jobs and the attraction of talent. Providing new job opportunities, acquiring an entrepreneurial mindset, affordable housing, in a high-quality family-friendly environment with diverse leisure offering, will contribute to retain that talent.

ŠIBENIK EXPANSION

Batižele will create a new centrality in Šibenik, naturally expanding the city with an urban mixed-use area, where citizens and visitors can come together. It will be host to city scale facilities and content-rich activities and events; educational, cultural, professional and sports related that will contribute to an urban year-round vibrancy.

A PLACE FOR ALL

It will be designed with a multigenerational approach, 'a city for all', comfortable for an ageing population, safe for children and affordable for youngsters. It will promote co-creation and participation in design and maintenance to raise the sense of ownership and pride and to reinforce the local identity.

VISION

Excellence in the Adriatic Sea

The Adriatic coast provides the possibility to experience the Mediterranean flavour as it once was. Panoramic views that extend to the shoreline over vineyards and villages, more than 1,300 islands with natural features, beautiful white beaches unique cultural assets rooted in its rich historical legacy are some of the distinctive features of the area.

At the edge of inspiring waters, the Adriatic Coast has enchanted sea-lovers for centuries. It has become a distinct location for fishery and tourism, with a diverse offering provided by the six countries whose shore is bathed by the Adriatic waters: Albania, Bosnia and Herzegovina, Croatia, Italy, Montenegro and Slovenia. The Adriatic's shores are populated by more than 3.5 million people; the largest cities are Bari, Venice, Trieste and Split, being the port of Split, just an hour from Šibenik, the largest Adriatic seaport by passengers served per year. Croatia stands out in the Adriatic Sea with more than 1,000 over the 1,300 islands on the Adriatic Coast, 20 UNESCO Heritage Sites and eight national parks, with a packed calendar of festivals, events and a host of home grown gastronomic delights.

There are world-know tourist destinations in the Adriatic capable of attracting millions of visitors each year like Venice and Dubrovnik. Šibenik belongs to the group of secondary destinations and has a growing tourist economy. The development of Batižele will contribute to raise the profile of the city from a touristic point of view, reinforcing its brand and differentiating it from other destinations.

Unlike the prime destinations, Šibenik is not overcrowded and still enjoys an atmosphere that preserves the traditional Adriatic values. The proposed development model will reinforce these values and aims to become a referent in sustainable touristic development, one that contributes positively to the wealth and well-being of the residents and is highly respectful with the local features. Uniqueness and authenticity is what will differentiate Šibenik from other destinations in the Adriatic, a place for travellers to blend with the local community.

PRIME DESTINATIONS

The six highlighted cities in the diagram register over 150K passenger movements by cruise cruise according to the *Adriatic Sea Tourism Report, 2019, Riposte Turismo*.

VISION

International trends

Šibenik´s brownfield urban regeneration must be inspired by the successful development of the best international practices which have managed to transform old industrial sites linked to the waterfront into thriving mixed-use neighbourhoods.

The final selection includes Bilbao Ría 2000 Urban-Galindo, Île de Nantes and Porto Montenegro. The identification of these reference projects is based on the following main criteria:

- Publicly owned land
- Publicly led projects
- Public private development model
- Change in the territorial model

These are the conclusions derived from the complete analysis compiled in the Benchmark presented at the end of this report.

CITY-WATERFRONT RELATIONSHIP

Porto Montenegro
Located in the heart of beautiful Boka Bay, the whole development faces towards the waterfront and creates a city in itself.

Île de Nantes
This project has reorganised the city centre, with a view to providing families with an alternative to moving to the suburbs and re-invigorating Nantes' relationship with the Loire River. It has also become renowned for its creativity with public spaces, reconfigured with a focus on sustainability and social inclusion highlighting a new creative cluster.

Bilbao Ría 2000 Urban-Galindo
The creation of more than 200,000 sqm of green areas and free spaces including a riverside linear park along the banks of the estuary has taken the city centre of Barakaldo a step nearer to the waterfront.

Šibenik
The project offers a great opportunity to:

- Incorporate public open spaces
- Create a new centrality
- Maximize the potential of the waterfront
- Extend the beach and the waterfront promenade, preserving local atmosphere

CONNECTIVITY

Bilbao Ría 2000 Urban-Galindo

Pedestrian ramps were designed to solve the urban connectivity problems and reconfigure the promenades and public spaces, enhancing the value of the waterfront. A new road network has been developed to support the new urban structure.

Île de Nantes

Following the deindustrialization of the shipyards, the island had poor connectivity to the city centre on the Loire River's opposite bank. The first phase comprised new residential complexes including an eco-district, new footpaths, access roads and bridges to connect with the river and the city.

Šibenik

The city could benefit from transit accessibility and new road capacity to:

- Implement new hotels, convention centre, small berth area
- Solve the carpark current issues
- Allow a better connection along the sea promenade and with the beach extension
- Enhance the pedestrian and cycling connections towards natural environmental areas
- To explore a rent-a-bike scheme for the whole waterfront
- Possible cable car station on site.

NATURAL ENVIRONMENT

Île de Nantes

Linked to the idea of wellbeing, a strategy of introducing nature (including productive) and the Loire in the city was developed through a network of parks, urban farms and private gardens.

Porto Montenegro

Architects and developers have worked with the government to minimise environmental impact with initiatives that include extensive seabed and land remediation work, recycling stone, brick and timber from the old naval port structures, and constructing new buildings, none higher than five storeys, in traditional style using local materials. This is an example of low density, ecologically sensitive and mixed-use development, sensitive to protect the country's rich natural ecology heritage. Porto Montenegro has been highly supportive as a founding member of the Green Building Council of Montenegro and has committed to pursue the BREEAM certification.

Bilbao Ría 2000 Urban-Galindo

The landscaping strategy for the project develops an urban man-made approach of the parks.

Šibenik

This part of the city offers the opportunity to:

- Establish a strong relationship with the natural landscape
- Explore the transition from the urban fabric and the city centre to the coastal area with a series of urban parks
- Renaturalize the urban fabric with a flow of wild parks

KNOWLEDGE AND CULTURE

Île de Nantes

The island features many cultural attractions including the Les Machines theme park, located in a former shipyard. Other areas stimulate creativity and build a strong creative ecosystem. The Quartier de la Creation has arisen as a focus for creative activity and a meeting point of artists, researchers, entrepreneurs and students. Samoa has taken a leading role in coordinating creative clusters.

Bilbao Ría 2000 Urban-Galindo

Culture has been a fundamental element. In the case of Bilbao, it has focused on two main components: the importance of the economic factor and architecture as a mean to visualize the change.

Porto Montenegro

The village has set out to create an evolving offer of community, private and corporate events. The events calendar is curated to ensure there is on-site entertainment for all ages and tastes through-out the different seasons.

Šibenik

The city has the potential to:

- Incorporate its local cultural assets
- Create new plazas and cultural open public spaces
- Develop tourism training facilities to attract talent
- Promote and brand its gastronomy
- Multipurpose building to accommodate cultural business and sport activities all year around

MIXED-USES DEVELOPMENT

Porto Montenegro

The development focuses on residential mixed buildings and a marina. It is oriented towards a leisure and hospitality approach. In order to attract permanent residents an international school and an innovation coworking centre have been incorporated.

Bilbao Ría 2000 Urban-Galindo

The master plan includes homes, industrial buildings, commercial premises, sports (new local team football stadium).

Île de Nantes

The development incorporates apartments (25% social housing, 25% affordable homes), economic activities (offices and retail) and community facilities.

Šibenik

In terms of land uses, it is recommended to:

- Be innovative and incorporate a wider variety of residential, retail, hotel, leisure mixed-use model
- Explore a flexible and hybrid mix, more resilient and able to evolve across time
- Include a range of hotels as a priority
- Consider waterfront land as a key value asset
- Health & Wellness facilities as main engine for regeneration

GOVERNANCE AND IMPLEMENTATION

Île de Nantes

Strong community engagement embedded in the area's planning and development. The Île de Nantes has been developed through a "plan-guide", a highly adaptable, light planning tool that differs from a conventional master plan. The plan-guide seeks to involve the community and present broad design principles that are capable of evolving as new needs emerge.

Bilbao Ría 2000 Urban-Galindo

The public-public partnership has been key for Bilbao Ría 2000 society. Thanks to this partnership, there was a very important initial investment almost exclusively public, which launched the project and led to the subsequent participation from the private sector. Urban regeneration, including land remediation, infrastructure and public realm urbanization were self-financed. Public social interest buildings were financed by the local authorities.

Porto Montenegro

A long-term lease has attracted a private investor experienced in luxury development that manages the whole development maximizing synergies between uses (marina, hotel, residential, retail...), while preserving the local authenticity and the built form diversity.

Šibenik

A flexible development model can:
- Adapt the role and involvement of public and private sectors to match each real estate product according to the requirements of the development phases
- Be phased in a progressive way to combine a long term vision with the ability to respond to changing future demand

INVESTMENT AND COMMERCIALIZATION

Porto Montenegro

More than €560 million have been privately invested into Porto Montenegro in Tivat until 2019, with an additional €500 million expected to be allocated to the nautical resort and marina project over the next 15 years. Many of the apartments have been sold off-plan. Regent Pool Club Residences follow the Hotel Condominium Model, allowing residents private access to the services and amenities of the 5* Hotel and Club. A property rental service is also available.

Bilbao Ría 2000 Urban-Galindo

Bilbao Ría 2000 invests in the cleaning and complete urbanization of publicly ceded parcels, addressing large-scale projects, and finally sells the resulting plots to private developers. The key to the success has been to combine planning long-term projects with short term performance, allowing citizens visualize the project in the short term.

Île de Nantes

Funding is addressed by a mix of private investment and public funding (through Samoa and various local and federal authorities). Special attention has been devoted to striking the right balance between homes, offices and local shops to favour social diversity. Nantes' urban developers understand the importance of cultural facilities, and the creation of pop-up spaces to attract young businesses.

Šibenik

It is advisable to:

- Share a common regional vision with all relevant stakeholders and establish a new partnership to develop it
- Establish a Real Estate Development Entity
- Attract private investment

The proposal has been tested during the design phase to respond to contemporary investment requirements

VISION

Programmatic drivers

ADRIATIC AUTHENTICITY

Known as the first town founded by the Croatian people, Šibenik authenticity is one of its values to be preserved. Batižele project will reinforce the character and the identity of Šibenik. The proposed vision master plan aims to extend the city of Šibenik on its west end and create a new piece of the city, a destination, a centrality for its residents, as a counterpoint and twin to Šibenik old town.

The project will keep fostering the public intent to promote a respectful development, avoid overcrowding and over-exploitation in order to maintain authentic local, natural and cultural values. Any promoted tourism will be based on living and experiencing the genuine local lifestyle, customs and culture. It will be fully integrated in the city and will blend harmonically with the surrounding landscapes.

Also, the project will support the public intent to diversify the local economy, combining tourist uses with uses capable of promoting local employment and enabling a highly qualified local workforce. An active and diverse neighbourhood that will combine peak and off-season activities contributing to the city's year-round vibrancy.

Batižele will be a new district that offers a high quality environment and thriving opportunities for locals and at the same time offers the travellers the chance of submerging into the authentic Croatian lifestyle.

HEALTH & WELLNESS

Šibenik has a privileged climate and natural setting: bathed by the Adriatic Sea and surrounded by impressive natural assets, with pleasant temperatures and large doses of sun throughout the year. This makes it a privileged spot to be enjoyed at any time, a quality that the master plan aims to reinforce by proposing a new vision of tourism based on well-being and benefits on the health of nature and open-air activities along with health infrastructures of the highest level.

With an increasingly aging population and the great medical advances that have occurred in recent years, the future of health and care is increasingly based on the creation of spaces for physical and mental well-being that prevent the appearance of diseases and pathologies. To this end, it is proposed to build a private hospital and a wellness centre with various facilities to promote diversity of healthy habits. In addition, the presence of a rich and varied high quality local gastronomy will also turn into an essential claim: The health benefits of the Mediterranean Diet and the presence of local products and ingredients of the highest quality will enhance the image of Batižele as a healthy tourist destination.

All of this will allow, in addition to providing resilience and diversity to the economy of Šibenik, attracting a large number of highly qualified young workers specialized in the health and services sector, reducing the gap that currently exists in the city's demographic pyramid.

CULTURAL AND NATURAL HERITAGE

Šibenik has very valuable cultural and natural assets. On the one hand, the city has a rich cultural UNESCO heritage and significant cultural assets. Apart from its monuments, Šibenik has a rich cultural life including concerts in the recently built open-air stage of St. Michael fortress, the annual International Children's Festival, the Medieval fair, the musical tradition of "klape" choirs and coral crafting activities.

On the other hand, the whole Šibenik region as a natural phenomenon is very attractive for visitors. Šibenik city is part of the regional network of natural areas and valuable landscapes and located in a strategic position between Krka National park and Kornati National park. Batižele development will benefit from privileged views to all these natural and cultural assets, enjoying an almost 360 degree valuable view: from its impressive views of Šibenik old town and gothic skyline to its impressive panoramic of Šibenik bay, St Anthony Channel and its protected landscapes, Krka estuary and Smričnjak hill. Besides, the connection between Batižele and the historic heart of the city will be facilitated by the proposed connection by cable car with Michael's Fortress.

But it will not only be a privileged spectator, but also an active participant. Batižele proposes a positive environmental impact development, turning unused industrial areas into high quality environmental areas and green spaces. In addition, the proposed program of uses gives great importance to the construction of public facilities, such as the multifunctional building, that can be enjoyed by the entire population for sports activities and the celebration of cultural events.

DIVERSE AND MULTIGENERATIONAL

In response to Šibenik demographic trends, with a population that is both ageing and declining, the programme for Batižele proposes a diverse and multigenerational mix of uses and facilities with a focus towards the whole generational range: the children, young people and the elderly. It aims to create 'a city for all', comfortable for an ageing population, safe for children and affordable for youngsters. Batižele will contribute to the attraction and retention of talent and population to revert the ageing and declining population trends.

The programme proposes to create a lively new neighbourhood with a mix of destinations close to residential areas, which will provide access to quality leisure and education, facilitate social and cultural interactions and attract business investment capable of creating new jobs to the city.

Batižele will be a family friendly neighbourhood and an inclusive urban environment. A pedestrian friendly, walkable city that reconnects the people to the green areas and natural spaces and provides them with places to rest and exercise. A walkable neighbourhood that offer streets, spaces and facilities for all ages, abilities and backgrounds to enjoy together, contributing to Šibenik's collective wellbeing.

Framework plan

FRAMEWORK PLAN

Design principles

WATERFRONT EXTENSION

The development is based on the premise of rethinking the hierarchy of relations and uses of the city, proposing a strategy that boosts the already existing urban anchors throughout a great axis from which different uses and different urban areas emerge as if it was the spine of a fish.

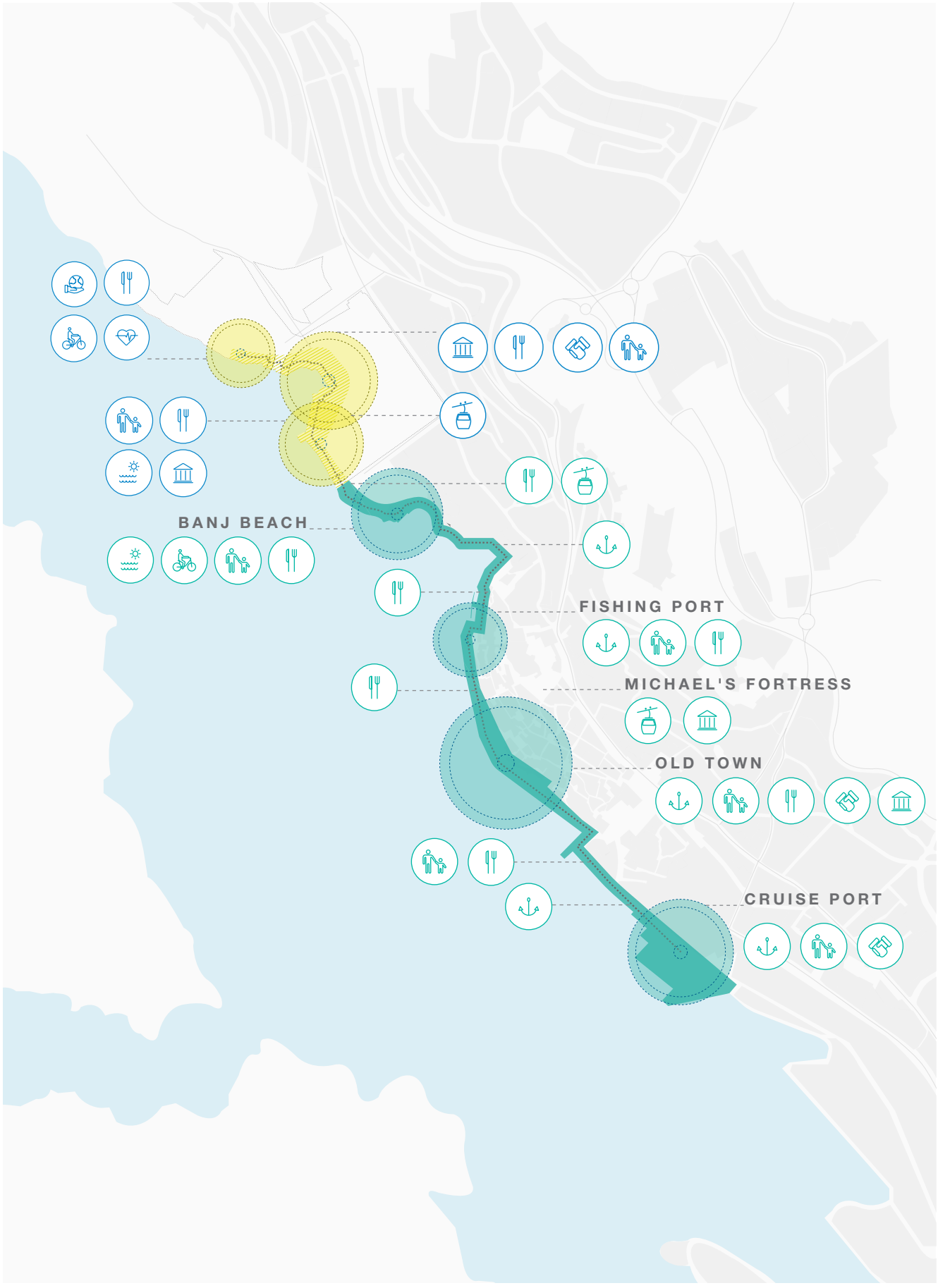
The axis from which to rethink urban morphology is the Šibenik Waterfront, whose end is located today in Banj Beach. The development proposes the culmination of this promenade by introducing new anchors full of activity that shall give a vibrant character to the entire walk: a constantly active axis in which the activity never stops and guides the rhythms of the city.

The introduction of new uses of a public, tourist and commercial nature will not only enrich and increase the economic resilience of the services currently existing in Šibenik –and more specifically on the seafront– but will reinforce them thanks to the linear distribution of uses. The constant succession of active spots will diversify urban life throughout the day, week and year, allowing “deseasonalization”.

Above all, it will be sought to create a pedestrian and accessible axis that connects –avoiding architectural, topographic and mobility barriers– the entire route that links Batižele with the urban centre, the cruise port and the train station, generating a constantly active pedestrian loop.

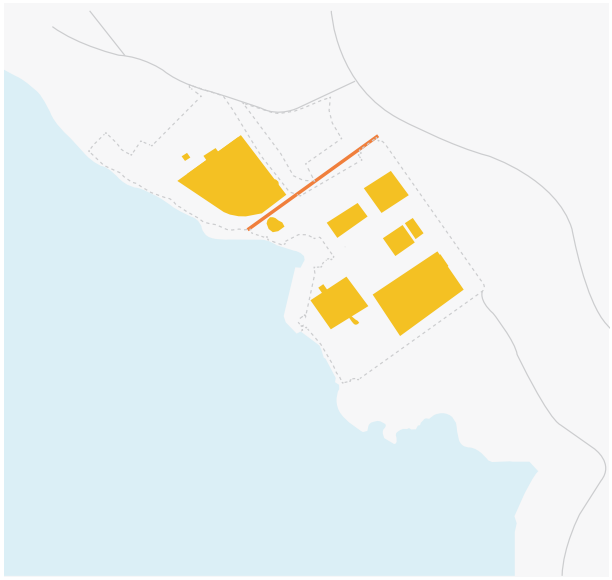
1. Fishing Point

2. Banj Beach


BANJ BEACH
FISHING PORT
MICHAEL'S FORTRESS
OLD TOWN
CRUISE PORT

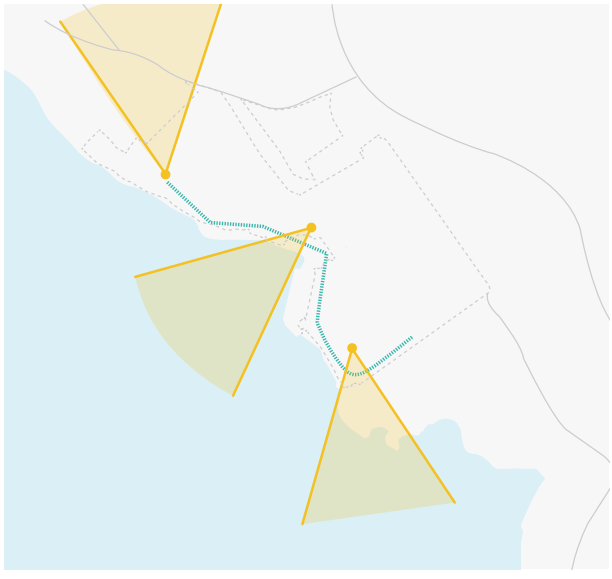
THE GREEN CORRIDOR

The proposal seeks to take the natural environment and landscape located north of the site and expand it as if it were a “green stream” descends from the mountains to Batižele. This creates a green corridor that is born on the site and sews it with the network of protected green spaces located north of Šibenik: Batižele now becomes a gateway to nature. The green strategy involves not only the design of a main axis but a series of secondary that will connect the corridor with the proposed areas, the seafront and the existing city around the site as if it were a circulatory system.



SITE SUITABILITY

It is essential to consider the bearing capacity in terms of urban design to place uses that do not require quality soil in those areas with a high degree of pollution, thus optimizing the economic profitability of the proposal and turning it into a design tool that allows to permeabilize public space. The layout of the development proposal takes into account the location of the potential land contamination. Where possible, the buildings have been located outside the footprint of former industrial buildings to avoid increase in the development costs due to unexpected contaminated hotspots. Material from excavation will be used as fill to avoid disposal costs. Open areas will be covered by a layer of clean material that allows new vegetation to grow It will also be considered the existence of a pipe that crosses and divides the site in two, in a perpendicular direction towards the coast line since it will not be possible to build over it.

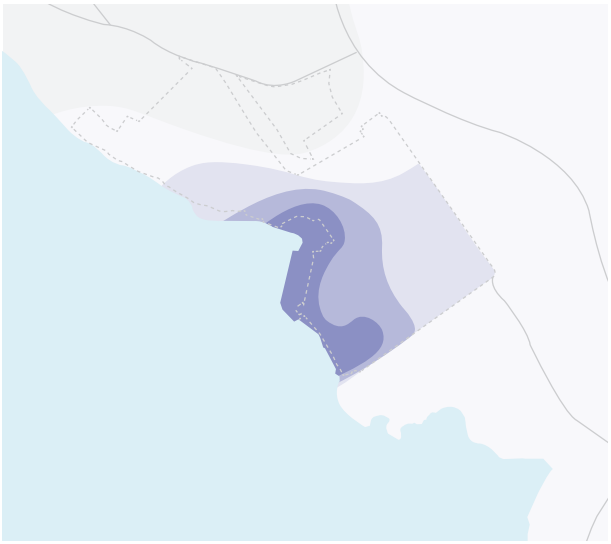


PANORAMIC VIEWS

The Site is located in an enclave with privileged views: the bay and the islands to the west, the historic centre of Šibenik to the south and the hills and protected natural areas to the north. The proposal must therefore be consistent with the urban and territorial context in which it is located, promoting the visual link among the area and the context surrounding it. Considering also the steep topography of the coastline, almost all the development will be at a higher level that will allow the opening of visual axes at different strategic points. In terms of urban design, the geometry of the site will be played so that broken geometries and angles will be generated with respect to the predominant axes in urban morphology in order to achieve the desired visual game.

DENSITY GRADIENT

The proposal seeks to minimize the impact that the intervention may have on its closest environment. Taking into account that the site is surrounded by a single-family residential area to the northeast and southeast, developments of lower urban density will be proposed there. In turn, it will seek to generate a new centrality towards the seafront through the introduction of public and tourist uses. This means that a density gradient will be generated in which those areas with the lowest building density will be located on the perimeter of the site, increasing as we approach the coast line.

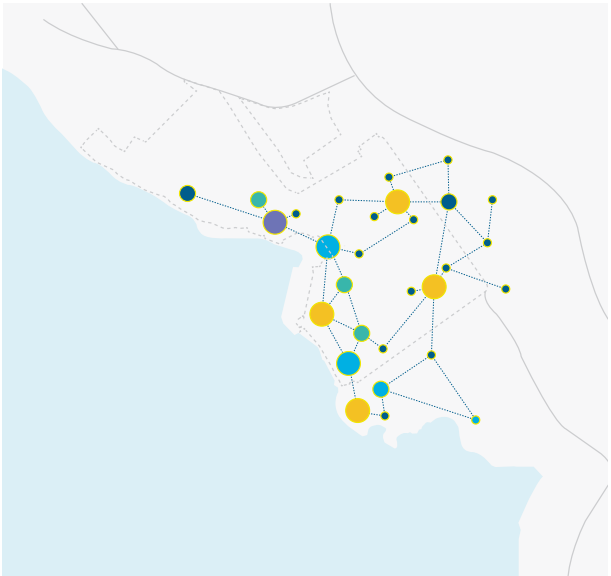


SOLAR ORIENTATION

It is sought to break the predominant southwest orientation (due to the morphology of the coast line) through the introduction of a new hierarchy of north-south axes that allow generating buildings that, being placed perpendicularly to them, will follow this N-S orientation. Thus, west orientation will be avoided in future constructions (as it promotes unwanted overheating in summer and is scarcely beneficial for solar gain in winter) and the subsequent construction of pass-through and correctly oriented houses will be forced - southern facades can be easily designed for a seasonal performance so that they are shaded in summer and allow solar gains in winter. This use of passive sustainable design strategies will contribute to reducing the consumption and energy dependence of the whole site.

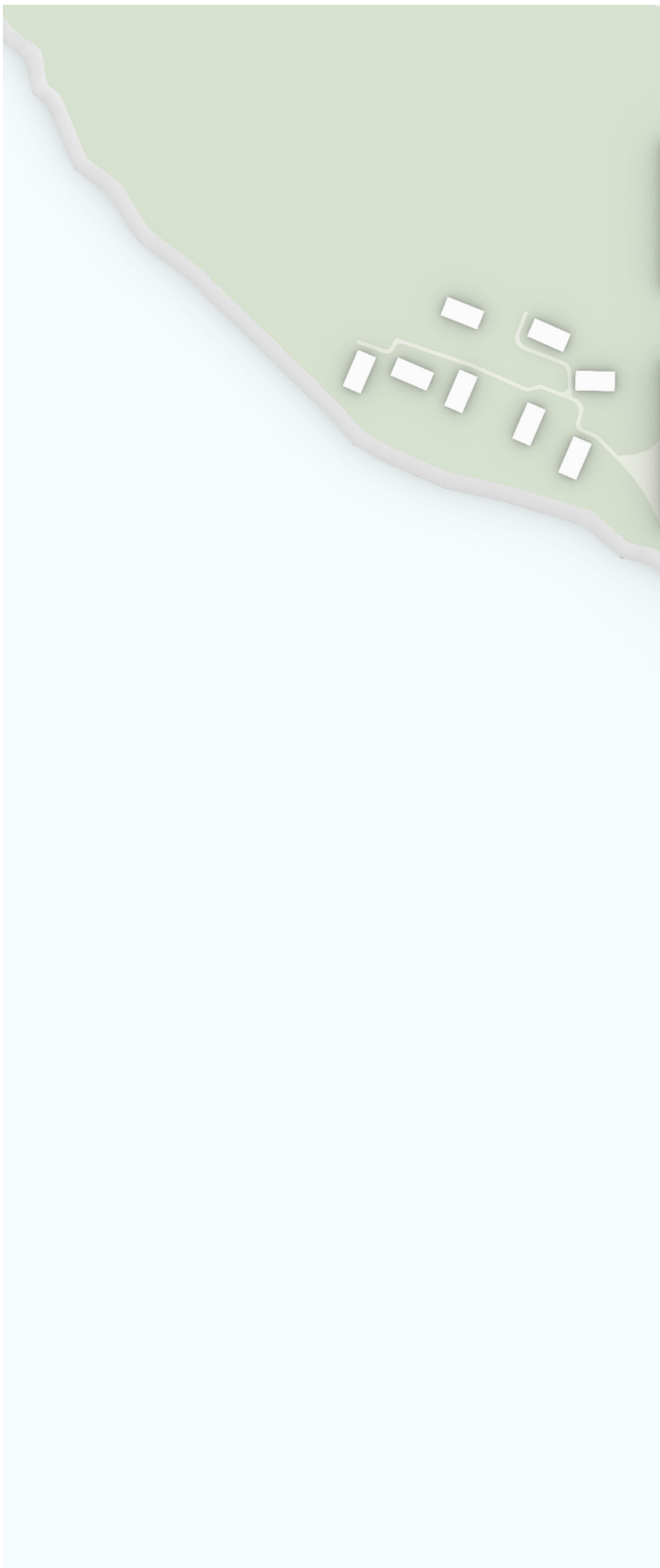
MIX OF USES

It is sought to generate a lively urban area full of constant activity through a maximum mix of uses that will give coherence to the group at the same time it allows each development areas to work independently. The greater the mix of uses, the greater “urbanity” and economic resilience of the proposal. The proposed uses, as well as the relationships among them, will be consistent with the density gradient described above, creating areas with less intensity of uses and of a more residential nature to the north and to the south. In turn, the proposed densification towards the sea front will entail the appearance of public with greater attraction capacity that will generate a new centrality in Batižele.



FRAMEWORK PLAN

Development proposal



The design principles have crystallized in a master plan that implies not only the extension of Šibenik waterfront from the south and the entrance of natural areas from the north; it also proposes the creation of a new centrality, anchored in strategical attractors, where those two forces converge.

The proposal extends the city of Šibenik on its west end and creates Batižele development to be experienced as a new piece of the existing city. The new development inherits and updates Šibenik old town and residential areas urban typologies, to preserve and strengthen the city's identity, and at the same time generates a destination with a unique character, a new vibrant area as a counterpoint and twin to Šibenik old town.

The proposed land use approach avoids intensively building the whole area and unlocks new valuable green areas that reconnect Šibenik with its natural areas through a central green corridor, showcasing the compatibility between urban growth and natural restoration. It concentrates density near the waterfront, and blends in with its natural and urban surroundings through lower density development areas.

ZONING

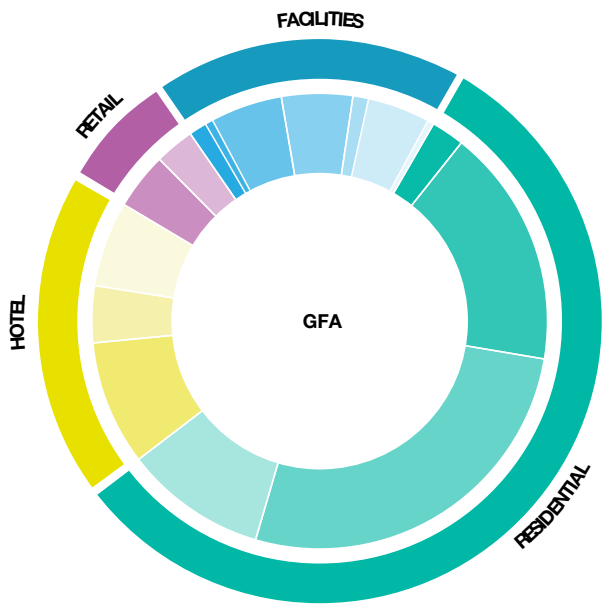
The proposal is based on a non-exhaustive and responsible land use approach, which concentrates density in some areas in favour of creating a valuable central spine of green areas and public spaces that structure the development and re-connect the city with the natural areas in the North. The proposed density also contributes to maximize resource efficiency through optimizing the investment in infrastructure of services and mobility network.

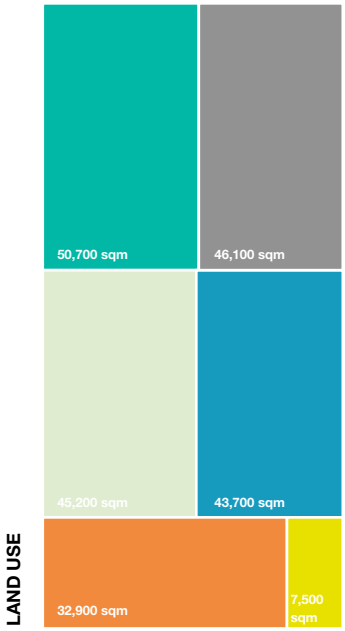
Highest density, pairing Šibenik old town urban fabric, is located in the waterfront area. This area also has the greatest mix of uses, including residential areas, three new hotels, a parking building, a gastronomic facility (Adriatic Culinary Centre) and ground floor retail and restaurants to promote streets and public spaces activation. Density is gradually reduced from the lively waterfront and the transition is materialized passing through medium density residential areas and ending with single housing residential areas.

The proposed residential densities and urban layout enables an appropriate volume and varied range of housing typologies to favour a balanced, cohesive and diverse mix of social groups and different types of family patterns. Hotel uses occupy the most valuable areas near the waterfront in order to benefit from the privileged views, while residential uses are placed in connection with adjacent residential areas, to continue the already existing urban fabric.

Batižele seeks to become a new neighbourhood for the inhabitants of Šibenik, which is the reason why great importance is given to public facilities of different sizes and scale of impact. Thus, local facilities can be found in residential pockets (educational, multipurpose and multifunctional facilities) while on the waterfront, the Adriatic Culinary Centre seeks a much greater reach. The construction of a high-profile hospital is proposed both to serve the entire city and to attract the health tourism mentioned before.

PROGRAMME OF USES





Use	Total plot area (sqm)	Buildability coef	Buildability (sqm)
Residential			**100,500**
Luxury apartment	1,400	3.00	4,200
High density apartments	10,100	3.00	30,300
Medium density apartments	19,200	2.50	48,000
Single housing units	20,000	0.90	18,000
Hotel			**33,800**
Convention Centre Hotel	3,500	4.50	15,800
Waterfront Hotel	1,600	4.50	7,200
Urban Hotel	2,400	4.50	10,800
Retail			**12,200**
Ground floor retail			7,200
Ground floor restaurant			5,000
Facilities*			**32,100**
Adriatic culinary centre	900	2.50	2,250
Multigenerational facility	2,000	0.50	1,000
Parking bdg + cable car station	2,600	3.50	9,100
Parking building	3,600	2.50	9,000
Multifunctional building: sports, culture, events	6,600	0.30	1,980
Health facility	26,400	0.30	7,920
Educational facility	1,600	0.50	800
TOTAL			**178,600**
Park & Green areas			
Park & green spaces	41,400		
Banj Beach extension	3,800		
Roads			
Roads	46,100		
Public space			
Pedestrian area	19,600		
Waterfront platform regeneration	13,300		

*Facilities will be decided by the CoŠ regarding the city's needs. These are merely illustrative suggestions

FRAMEWORK PLAN

Real estate strategy

FUTURE TREND PROJECTIONS

To ensure the economic viability of the master plan, the proposal has been subjected to soft market testing with potential investors. Growth forecasts and trends identified for a 10-year period are detailed below:

Expected market conditions

- Continued economic growth and improving macroeconomic conditions
- Continued tourism growth but at slower pace and with prolongation of the season to spring and autumn months
- Increase in hotel supply
- New international hotel brands and concepts are expected to enter the market
- Residential market will remain the most liquid property market despite slight population decline
- Increase in residential development on outskirts and social housing development
- Stabilised level of retail supply
- Increasing importance of hospitality, food court, fresh foods and entertainment concepts in retail development
- Strong increase of e-commerce share in retail industry
- Low increase in demand for office spaces, mostly in industrial zones
- Increase in demand for warehouse/logistic space in line with technology trends
- Increase in number of passengers going through Zadar and Split airport which indirectly affect the tourism/business activity in Šibenik area

The inputs used in this overview are based on the latest market trends prior to the COVID-19 pandemic. Since this is a long term project, we believe that the situation will normalize by the time this project starts with the development and that COVID-19 won't influence it.

IMPLICATIONS AND SCALE SUGGESTIONS

This part of the report will show our projections of the demand for TEF site and will focus on appropriate commercial components, stemming from market research conclusions and assumptions based on our experience and knowledge. We would like to emphasize that the projections are very sensitive to change of any inputs and the resultants can vary significantly. Therefore, the below projected figures are indicative.

Below we show the main components of envisioned commercial use on the site and their potential scale ranges. The envisioned components are complementary and will create synergistic effects.

Based on market research as most prospective asset class for TEF site we see residential segment followed by HTL (Hotels tourism and leisure), retail and F&B (food and beverage) segments. There is also a need for a multifunctional facility which could accommodate conference centre, fairs, smaller sport events (martial arts, table tennis, fencing, gymnastics, etc.) and cultural events (exhibitions, concerts). Besides these, we would also recommend a primary school and kindergarten to accommodate for the 1,100 new apartments which we envisioned to be built in 15 year period.

The projected figures are in line with recorded absorption rates and are our rough estimates.

TEF site is assumed to develop into a mixed-use neighbourhood with residential area covering approximately 45% of the site and a large segment of cultivated greenery. The residential component and the assumed hotel development will create demand for retail component as well as for parking component and conference facility with multifunctional usage. Below scale figures show total

envisioned gross floor area of each component throughout several years while in the following chapter we present the phasing.

Development of infrastructure, streets and park is usually in the jurisdiction of the city and should be financed from communal contributions paid by the developers of buildings in the area. Transport, schools and kindergartens are also under the city jurisdiction. Other content can be incorporated through spatial planning but depends on interest of private investors.

Share of GFA per segment of assumed development is in following table.

Segment	Share GFA
Residential	56.3 %
Retail and F&B	6.8 %
Hotel + Convention	18.9 %
Facilities	7.8 %
Garage	10.1 %

Residential

Population in Šibenik is decreasing by approximately 200 per year. Nevertheless, demand for residential properties is very strong but mainly directed towards affordable mid-range price apartments. Our assumption of optimal number of apartments on Batižele site amounts to approximately 1,200 based on following research implications:

- Site area suggested for residential purpose 50,700 m² (5 ha) – approximately one fifth of the total site
- Average density in overall Šibenik area is around 40 inhabitants/ha, but we envision this as a slightly denser zone at 45 inhabitants/ha
- Average no. of persons per apartment is 2.5
- Share of apartments used as tourism rental is 15%

Residential site size	50,700 sqm
Average population density	45 persons/ha
Site population	2,282
Person per apt	2.5
Share in tourism use	15 %
Total apartments	**1,070**

Average apartment absorption rate is assumed to be 75 apartments per year which is in line with market conditions. Hence, assumed development is spread throughout 15 years.

Average annual number of apartment transactions in Šibenik (POS included) in the past 5 years is close to 250. Our projections would account for approximately 30% of the average annual demand in Šibenik area. Because of favourable location and projected mid-range pricing policy we believe that this number is sustainable. If the development is prolonged to 20 years, average number of apartments per year would amount to 55 or 25% of current annual Šibenik demand.

Alternatively, if the phasing for residential development is maximised we believe that 100-120 apartments could be absorbed by the market annually (if priced sensibly).

Retail and F&B

Retail and F&B (food & beverage) component is necessary for development of residential neighbourhood and to cater to local population and tourists from the hotels. Convenient shopping scheme would be the most appropriate for the site in line with market trends. We expect one or two big-box food retailers will take up at least between 2,000 and 3,000 m² GFA and could be incorporated as ground floor in residential development. The offer would also have strong F&B segment at the beachfront and typical services complementary to residential development. Therefore, total retail and F&B component would be in the region of 12,000 m².

Hotels

The General Urban Plan (GUP) envisions a maximum of 2,000 beds in hotels on site. We believe that at current market situation, around 50%-60% of it is sustainable to be developed in the period of 10-15 years. We envision three hotels: a large hotel with included conference facility with 200 rooms, a boutique waterfront hotel in the upscale segment with 100 rooms, and an urban hotel with 180 rooms. The three hotels would provide various offering and would be complementary with the ground floor retail in plaza style along the waterfront. Thus, we envisioned that hotel segment would have approx. 480 accommodation units.

Garage/Parking

Parking is necessary to support the residential, retail and public facilities as well as the local Šibenik population which comes to the Banj city beach. Exact numbers for parking component should be derived from traffic study and GUP regulations. The layout includes two parking buildings: one parking of 230 places with a cable station which would connect the location with the forts in the old town, the second with 300 places.

Public/semi public facilities

A total of 5 public / semi-public facilities are envisioned at the site: Adriatic culinary centre which would act as an F&B and educational facility; multigenerational facility for minor sport events and local music, culture and similar events; multifunctional building, a large health facility located along the waterfront in west of the site and educational facility (a kindergarten). There is also a strong demand for conference facilities in whole of Croatia as it doesn't yet have a developed conference destination for full year operation. This would be covered with a congress centre as a part of the hotel.

PHASING

Assumed development is spread throughout 15 years. Demand is grouped according to suggested phasing from previous chapter.

Demand for floor space for each commercial use type over time is shown in following tables.

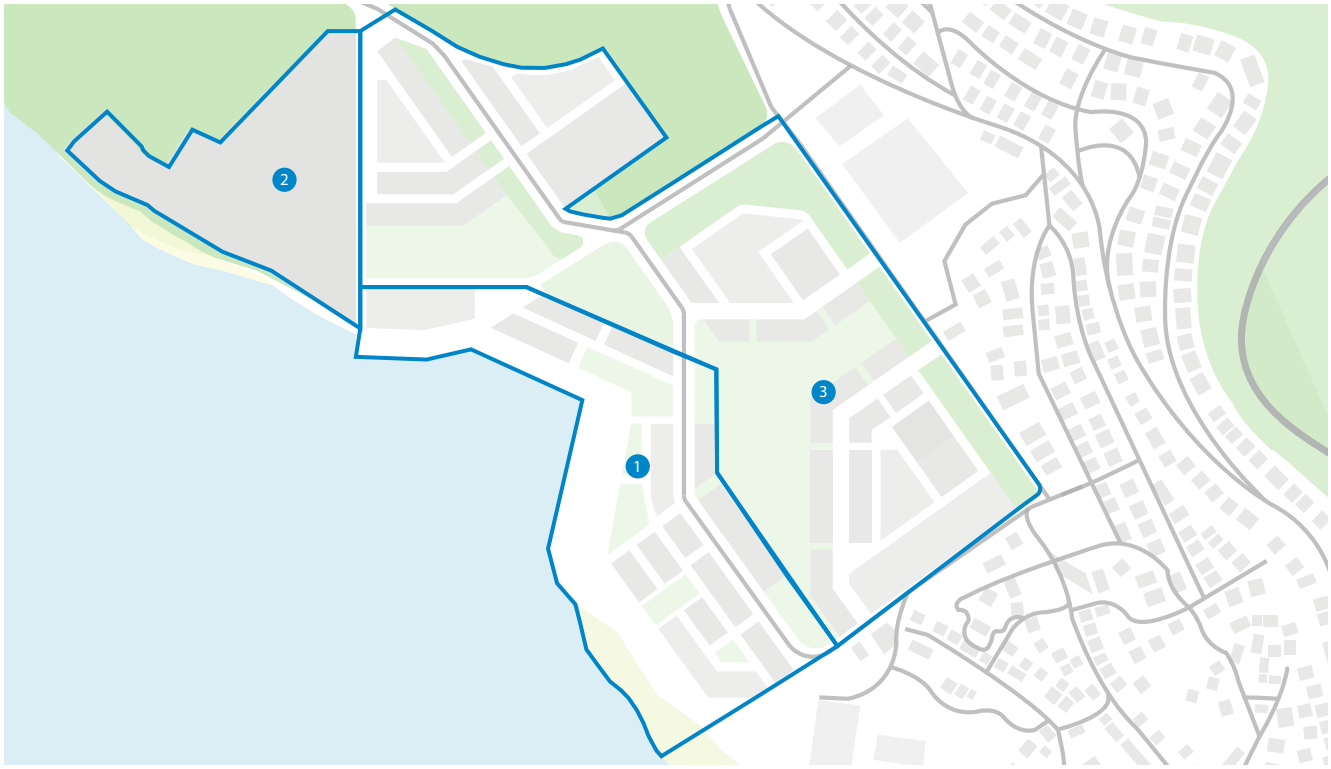
Segment	Phase I Years 0-5	Phase II Years 5-10	Phase III Years 10-15	Total GFA
Residential	40 %	30 %	30 %	100,500 sqm
Retail and F&B	40 %	30 %	30 %	12,200 sqm
Hotels	40 %	30 %	30 %	33,800 sqm
Public Facilities	20 %	80 %		13,950 sqm
Garage	50 %	50 %		18,100 sqm

VALUE PROPOSITION

Value propositions needed to attract users/tenants as well as investors to these types of uses on the site are listed below.

General propositions	Very good location, in terms of distance to city centre
	Large development potential
	Excellent connectivity
	Large number of visitors, local population using the Banj Beach during summer season
Propositions per segment	
Residential	Newly built stock
	Attractive mid-range pricing
	Small share of luxury apartments
Retail and F&B	High footfall
	Convenient shopping serving the community
	Waterfront F&B component complementary to small berth area and hotels
Hotel	Tourism growth
	Differentiation in terms of business / leisure by developing two or more hotels
	Synergic effect of hotel with convention centre
	Minimum 120 rooms per hotel to attract international hotel operators
Facilities	Adriatic Culinary Centre acts as extension of the F&B zone
	Serves as a centre for local community
	Cultural, music, convention and minor sport events
	Private hospital
Parking garage	Accumulated demand for parking for beach users
	Excellent extension of the city's public transport system
	Necessary in case of a planned dense development
Investors	
Propositions	Attractive IRR returns
	Potential for large scale projects

DEVELOPMENT AREAS



The proposal is structured by a large central park and divided into 3 development areas, each of them with their own unique character.

1. Batižele Waterfront
2. The Hill Wellness District
3. The Villa

The proposal concentrates density along the waterfront - on Batižele Waterfront development area (1)- in order to complete the vibrant city of Šibenik on its west end.

This area concentrates the higher densities and the most mixed program - including hotels, residential buildings, ground floor retail and restaurants, and facilities such as the Adriatic Culinary Centre - to create an active waterfront consisting of a network of squares and lively pedestrian streets, pairing Šibenik's old town.

Density is gradually reduced from the waterfront towards the hills and natural areas and towards the residential urban fabric adjacent to the site, blending in with both its natural and urban surroundings.

The Hill Wellness District (2) is conceived as a health campus constituted by a main building for hospital use, surrounded by small pavilions integrated with the natural environment - as a transition from the site to the mountains - in which temporary accommodation and healthy activities in contact with the nature would take place.

Thereby, not only will new economic activities be introduced to boost the economy of both Batižele and the city of Šibenik, but it will also attract highly qualified professionals who will become new residents of the city.

The Villa development area (3), mainly residential, from medium to low density, integrates with the existing Crnica and Njivice single housing neighbourhoods and includes new public facilities that could complement the existing sports facilities adjacent to the site, in order to serve both the existing and the new inhabitants.

The Villa is made up of three residential clusters - each housing a different public facility- structured along the central park, allowing the pedestrian connection of the entire Batižele residential fabric with both the waterfront and the mountains.

BATIŽELE WATERFRONT

Banj beach extension | Seafront Promenade | Landscaped waterfront| Touristic marine-culture | Residential: luxury residential apartments; service apartments; branded residences | Urban Hotel | Leisure | Restaurants | Ground floor retail | Pedestrian streets and public spaces | Parking building | Convention centre | Waterfront hotel | Adriatic Culinary Centre; Gourmet shops

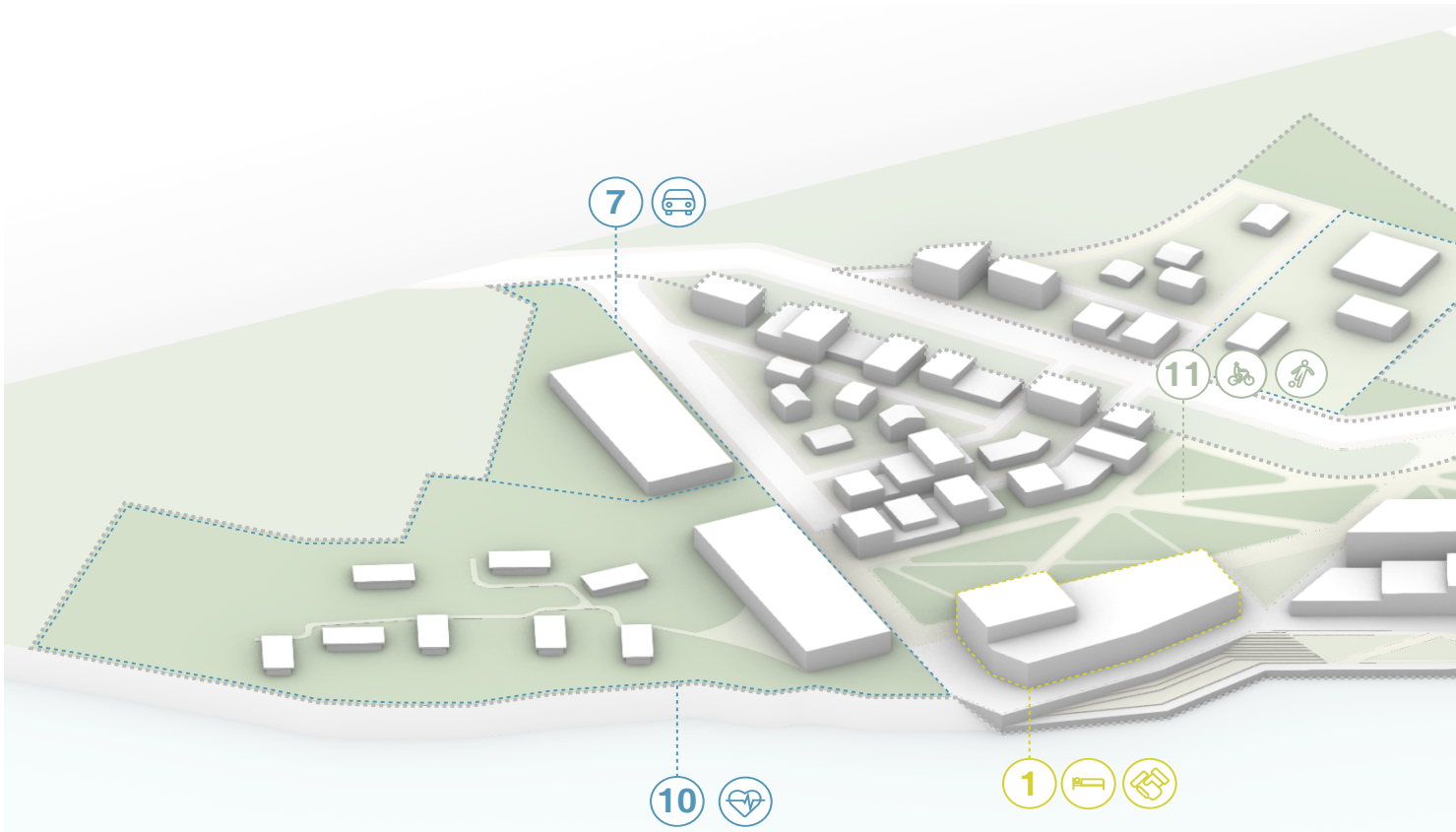
THE HILL WELLNESS DISTRICT

Hospital | Wellness lodge | Exclusive green areas| Outdoor activities | Wellness and spa | Gourmet restaurants and bars: local/ healthy avant-garde and seasonal cuisine | Observatory and stargazing

THE VILLA

Residential: high-middle class/ affordable housing, medium/low density | Local commerce | Restaurants |Social/ multigenerational facilities | Multipurpose facilities; Sports areas | Educational facilities | Urban parks and plazas | Central park; Green Corridor | Cycling network

Hotel
Residential
Facilities
Retail



HOTELS

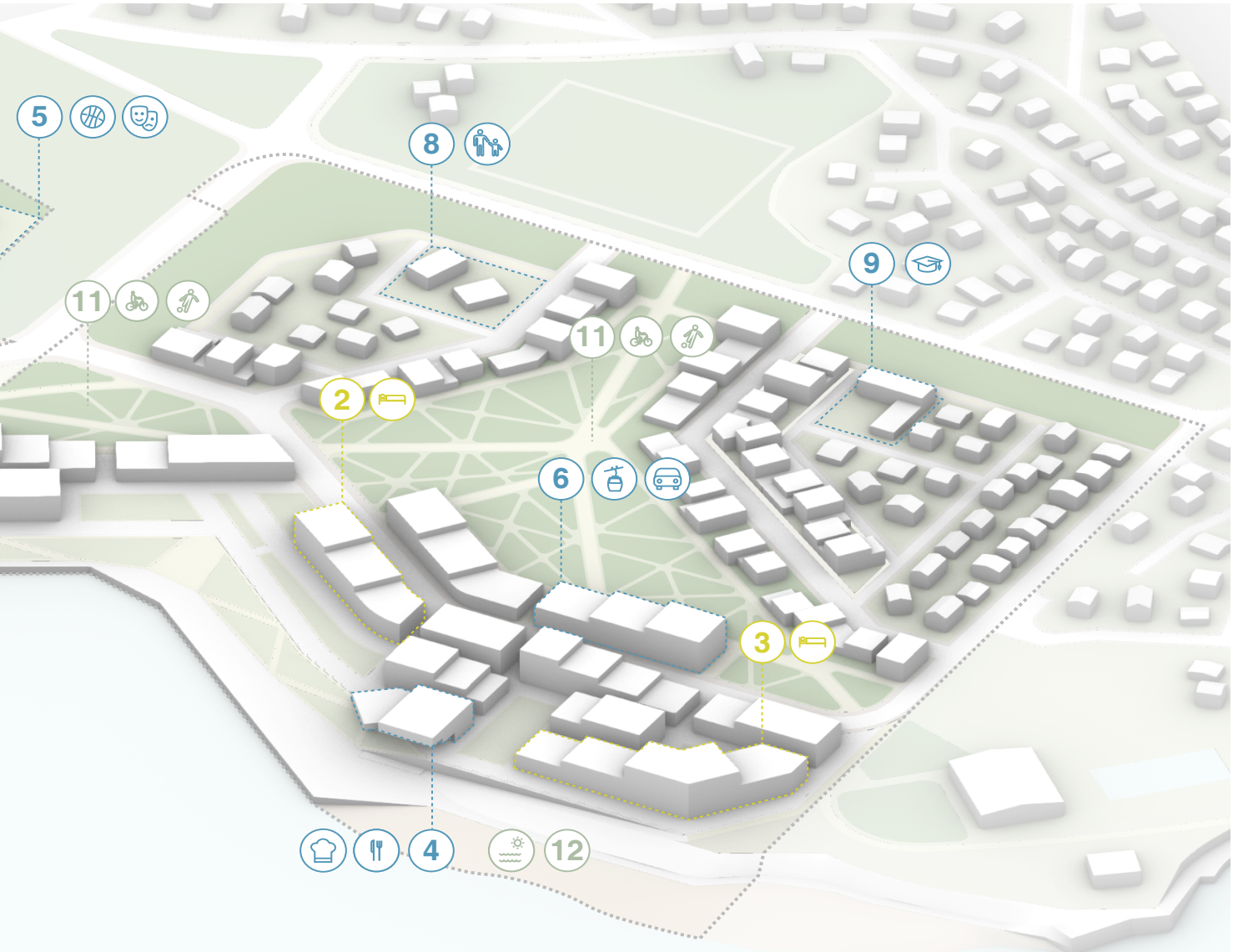
1. Convention Centre Hotel
2. Watefront Hotel
3. Urban hotel

FACILITIES

4. Adriatic Culinary Centre
5. Multifunctional facility
6. Parking building + Cable car station
7. Parking building
8. Multigenerational Facility
9. Educational Facility
10. Health and Wellness Facility

GRE

11. C
12. E



EEN AREAS

Central park

Banj Beach

Feasibility studies

Technical feasibility

ACCESSIBILITY AND MOBILITY CONCEPT STRATEGY

The design maintains the new access to Šibenik according to the GUP. However, main roads are embedded within the park and green areas, minimizing the visual impact and noise pollution derived from this infrastructure. This allows the connections within the site to be channelled through the central park, which sews the master plan allowing a total pedestrian and bicycle connection among the different development areas.

The road mobility strategy of Batižele development is based on a hierarchical road network:

- The main road crosses the site as established in the GUP. Thus, the site will become one of the main access doors to the city. This road will be 20 m wide, with a two-way road with one lane for each direction plus two lines of parking and generous sidewalks.
- Two secondary rings are proposed for the inner mobility of the residential areas. These streets will be between 10m and 15m wide, with two-way road with one lane for each direction plus one-line parking.

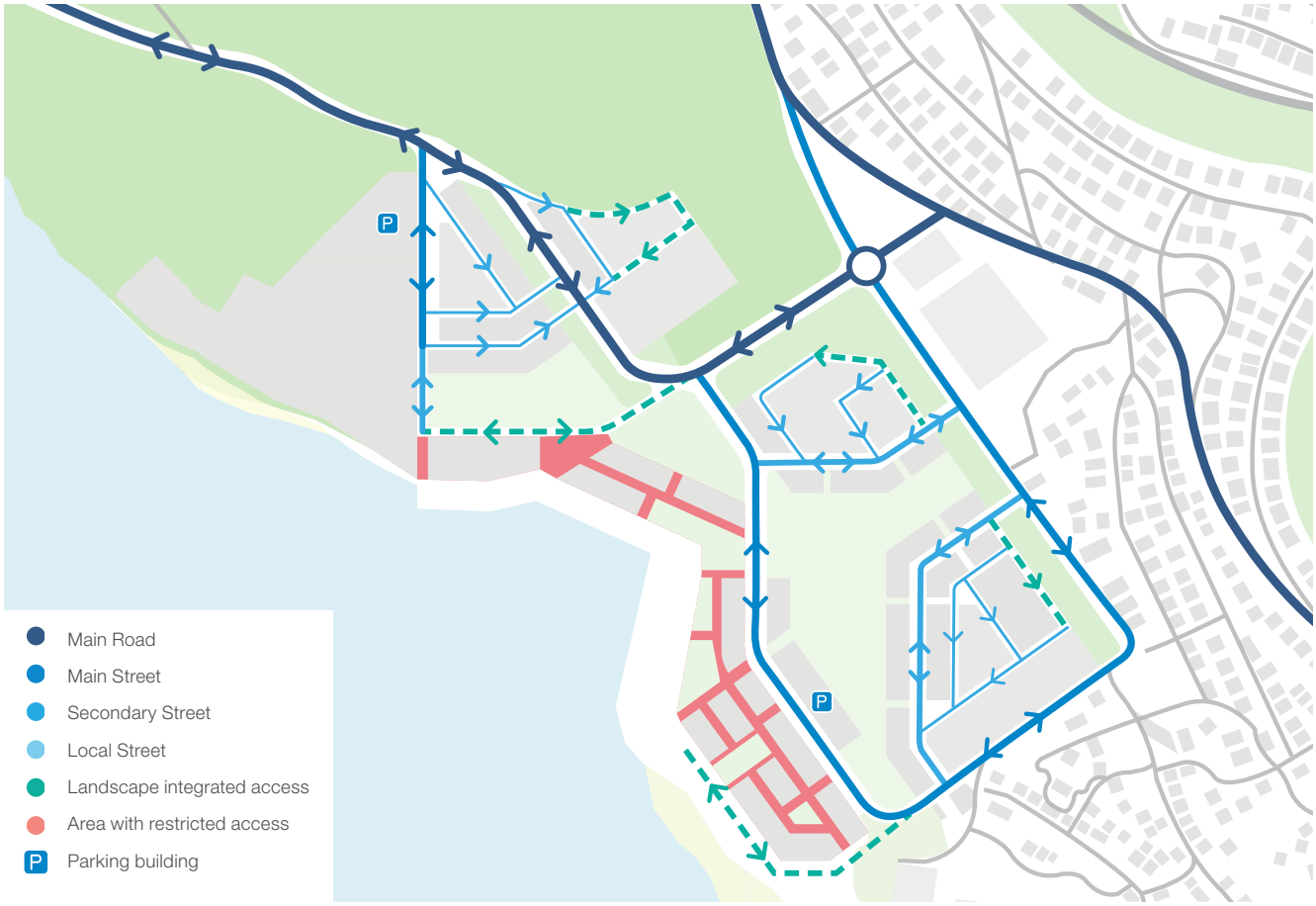
The network is complemented with:

- Local one-way roads in residential areas. Theses streets will be 8 m wide, with one-way single lane road and sidewalks. The ones adjacent to preserved tree areas will be landscape integrated, sidewalk level roads with vegetated permeable pavements.
- Access for the Health & Wellness Centre and Convention Centre Hotel will be through a two-way road connected to the main access at the west end of the site. This access will have vials in both directions and will have a parking building at its beginning.
- Two parking buildings will be provided: one in the northern access to serve the Health & Wellness Centre, the Convention Centre Hotel and the adjacent residential areas; and another one in the south, next to the central park to service hotels and houses on the waterfront.

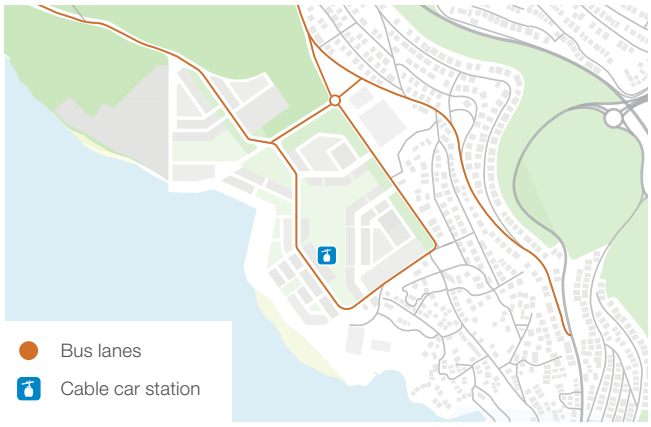
The whole waterfront area is designed as a pedestrian priority area, extending Šibenik's seafront pedestrian itinerary. Limited scheduled access will be provided for visitors, residents and emergency services vehicles.

Batižele will also include a network of bike lanes in order to promote cyclist mobility though the proposed green areas and to reconnect the site with natural areas and the already existing cycling routes.

Mobility to the historic center will be facilitated by connecting the site with St. Michel's Fortress through a cable car. It is proposed to locate the cable car station in the southern parking building.



Soft mobility: cycling and pedestrian network



Public transport

Legal feasibility

COMPATIBILITY WITH CURRENT SPATIAL PLANNING

The development proposal has been thought to follow best international design criteria and local urban form and atmosphere. The result is a proposal that seeks to achieve the highest urban standards. In some aspects it does not completely align with the current municipal spatial plans as detailed below:

Purpose of the site

Most of the area is classified as “undeveloped area - urban transformation (3.1.)”. Undeveloped areas are defined as unfinished areas of the city in transformation, urbanely undefined and only partly built with underdeveloped street network, subject to rehabilitation or urban regeneration and a high degree of modification. This urban regeneration is the purpose of this project.

Mix of uses

The General Urbanistic Plan classifies most of the area as “M”, being a mixed (residential, commercial and touristic) usage zone, some classified as “ZP” meaning green areas, and finally five “R6” areas, classified as beach. The proposed mix of uses includes residential, hotel, retail, touristic facilities and educational and social facilities.
Specific requirements include.

- Up to 30% of the area designated for tourist hotel use (T1) with accommodation capacity of up to 2.000 beds. The proposal includes 33,800 sqm GFA of hotels.
- At least 10% of the area of the zone should be arranged as a green area - a public park. 41,400 sqm have been reserved for parks, which makes 18.5% of the site area.
- Arrangement of the space of importance for the whole city (building public and social content, cultural, sports etc.). The proposal includes a Convention centre within one of the hotels, Adriatic Culinary Centre, an Educational Facility, a Multigenerational Facility, a Multipurpose Facility and a Health & Wellness Facility.
- Construction of the central square and a network of pedestrian walkways (especially in the coastal area). The proposal includes a 530 metres extension of the waterfront promenade and the creation of a central park with several pedestrian routes to connect with the city and with the surrounding natural environment.
- Organization of the beach as a continuation of the Banj beach on the seafront, 100 meters from the border of the beach Banj. The beach will be extended by 150 meters.
- Other contents and areas in the zone (commercial, public-social, sports-recreational, other green areas etc.) that are significant for the function of a residential zone should be dimensioned according to the number of zone users. 3 sqm of public parks per inhabitant and playgrounds according to the following standards: 0.07 sqm per capita (for children 1-3 years), 0.35 sqm per capita (for children from 4 to 10 years old) and 0.42 sqm / capita (for children aged 7-15) for users within the area of mandatory urban planning. The proposal includes 7,200 sqm of ground floor retail and 5,000 sqm of ground floor restaurants. As mentioned before, the proposal includes 41,400 sqm of park whose purpose is to become the axis of civic life for the city, attracting families, children and elderly with cultural, recreational and sports activities, which will be complemented by the Adriatic Culinary Centre, three new public facilities: multigenerational, multipurpose and education; and two new private facilities: convention centre and health facility.

Maritime domain

Maritime domain stretches at least six meters from a line that is horizontally distant from the middle of the higher high waters. The proposal includes a rectification of the coast and the extension of the beach. All plots and buildings are at a 25 meter distance from the original maritime domain.

Site limits

The project focuses on the Batižele site as defined by the Batižele ltd. ownership structure from the land registry. However, the need to solve the relationship with the waterfront and with the surrounding areas makes that some of the public space interventions are thought for areas outside the strict site limits.

Connectivity

The proposal is adapted to the road infrastructures foreseen in the GUP. Therefore, the proposed road layout is adapted to the new main access to the city foreseen in the GUP, from which the site's internal mobility strategy will be articulated.

Streets widths

As established in the Article 60. paragraph 3 of the GUP, street width is defined according to their importance:

- City Magistrale: 20.0m,
- Main street 10,0m,
- City street 8.0m,
- On other streets and other public transport areas it is 5.0 m except in areas where due to local conditions it is not possible, or where local conditions permit a smaller distance.

The proposal is compliant with these parameters.

Parking provision

Based on the parking requirements per use set in the GUP, 2.490 new parking spaces are required for this development. The proposal includes a parking strategy that provides 2.650 new parking spaces (street-parking not included), making it fully compliant with current legislation, although some of this parking is provided in dedicated buildings and not inside each use plot.

Building parameters

Current legislation includes a series of parameters for building placement and design. The current proposal includes, just for feasibility analysis purposes, a selection of building typologies. However, the final design solution of the building is not the purpose of this document.
In summary, the proposal is compliant with all spatial planning provision except three:

- **Construction coefficient.** City planning legislation limits the maximum occupancy of the plot by the building footprint in 0.3 for free standing buildings, 0,35 for semi-enclosed building and 0.4 for built-in buildings. Part of the residential and hotel plots of the proposal do not comply with this coefficient. The intent of the development is to create a new centrality for the city, with an active and vibrant public space similar to the current city centre of Šibenik. This requires certain density which would not be possible with the mentioned construction coefficient. The proposal is to include in the General Urban Plan an area on the site where these limitations are not applicable. These areas would include the waterfront and the residential plots surrounding the central park.

- **Building distance.** As stated above, the proposal proposes the creation of a vibrant and dynamic urban environment that is incompatible with the disaggregated planning defined in the GUP. According to the special provisions for the site, the minimum distance of the building from the neighbouring building particle is half the height of the higher building but not less than 5.0 m; the minimum distance from the regulation line is 10.0 m. Again, the proposal is to eliminate this limitation for specific areas of the site.

- **Heights and buildability.** The number of floors is limited to 4, except from 5% of the development that can reach until 10 heights. High density residential buildings and hotels located in the waterfront could reach until 5 floors in order to achieve the desired buildability and the urban density desired for this proposal. Therefore, more than 5% of the development wouldn't meet the standards of the GUP.

Decision of the City Council of Šibenik
to prepare a Spatial Plan or modify
an existing one

Spatial Plan proposal preparation
by authorized architect

Start of Public participation
period (30 days)

End of public participation.
Preparation of public debate report

Modification of the Spatial Plan proposal
based on accepted suggestions

Submission of the Council
Planning Office recommendations
to the Spatial Plan

Approval from the Ministry (in case plan
affects 1000 m strip from the coastline)

Find approval by local self government
unit - City Council of Šibenik

PLANNING APPROVAL PROCESS

The development of the Batižele area will require the development and approval of an Urbanistic plan of development (UPU), a detailed plan for the development of a specific area.

In addition, the proposal is not fully compatible with the building parameters as defined in current spatial planning:

- Construction coefficient
- Building distance
- Heights and buildability

Therefore, the following steps would be required in addition to the UPU:

- Amendments to the existing Spatial plan of the town of Šibenik
- Amendments to the existing General urbanistic plan (GUP)
- Amendments to the County (Šibenik-Knin) Spatial plan of development

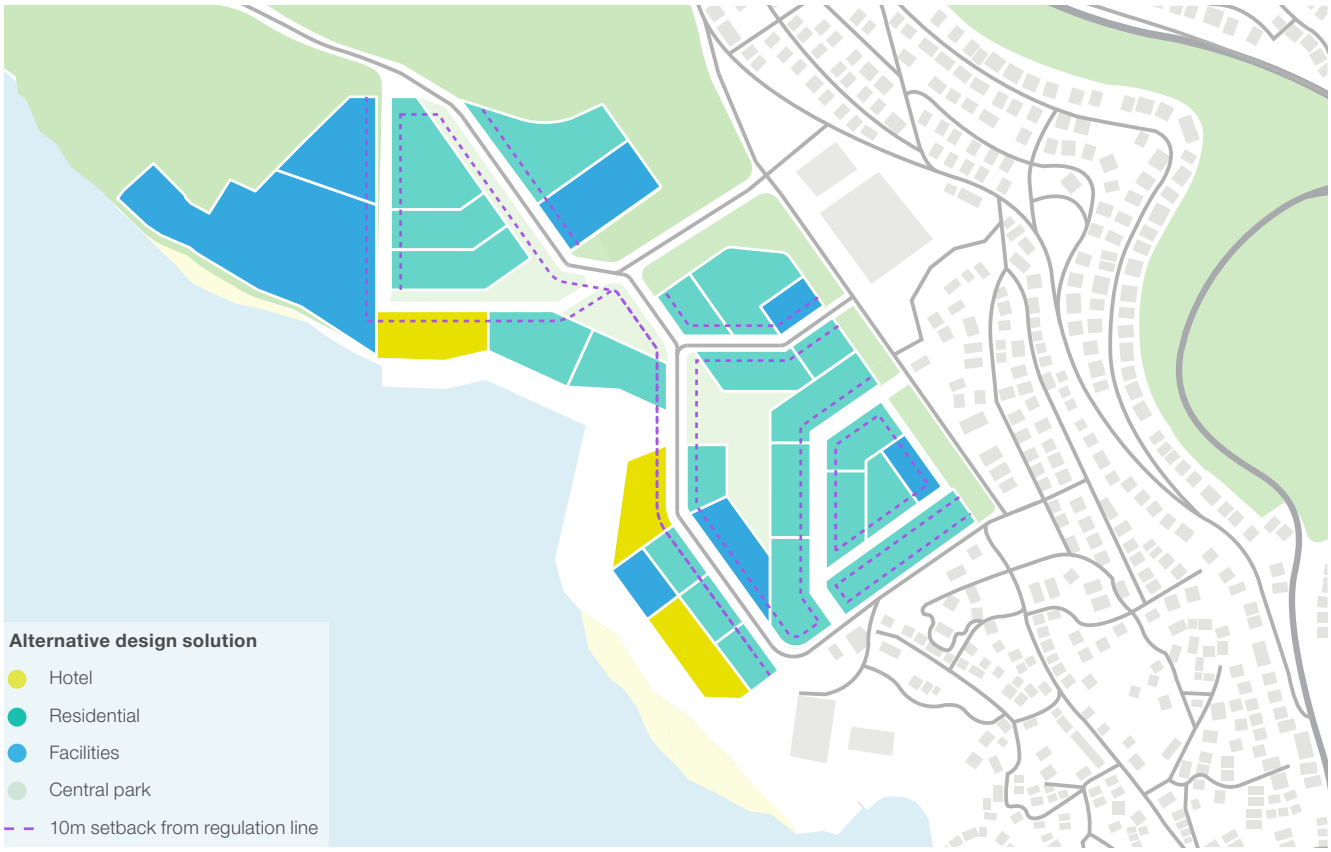
Changes to three planning documents would require involving the County and would take a long period of time, which has been estimated in one year, although this estimation is tied to some uncertainties.

ALTERNATIVE DESIGN SOLUTION

The provision of the Article 20, paragraph 9. of the Šibenik Spatial plan states that UPU can determine a bigger construction coefficient than 0.4 , but not bigger than 0.6. We consider that the building distribution and GFA is the adequate to achieve the density and atmosphere to create a centrality, especially in the waterfront area. However, it is possible to mantain the proposed mix of uses and buildability per use without modifying higher hierarchy planning documents.

Considering that the GUP also establishes a minimum endowment of green areas of 40% per plot, it is proposed to reduce public space - especially the central park and pedestrian areas - granting large part of their surface to adjacent plots. In this way, the construction coefficient of 0.4 can be met without drastically altering the design proposal. The possibility of applying a construction coefficient of 0.6 is reserved exclusively for 2 of the 3 plots for hotel use on the waterfront.

Besides, as mentioned before, according to the special provisions for the site, the minimum distance of the building from the neighbouring building particle is half the height of the higher building but not less than 5.0 m; the minimum distance from the regulation line is 10.0 m. As shown below, proposed subdivision into plots allows compliance with the 10 meters setback from regulation line.



Environmental feasibility

MAIN SOIL CONTAMINATION AND GEOTECHNICAL CONSTRAINTS

Previous development of the site has resulted in constraints for future development relating to both contamination and geotechnical aspects. Remediation works have been undertaken by the City of Šibenik and have resulted in major improvements to the site, however as is typical on brownfield sites, several site-specific constraints remain that must be addressed prior to or as part of the development. Uncertainty in ground conditions is always an issue on brownfield sites and the associated cost uncertainty should be considered in the cost plan.

In the Stage A report initial geotechnical constraints and possible approaches to remediation were developed based on review of available documentation. These have been refined to identify the key ground-related risk items and develop a strategy to manage constraints and mitigate risks.

Remediation required by the regulator

Information provided by City of Šibenik indicates the remediation programme, including soil and groundwater across the entire site, has been approved by the Croatian environmental regulator, subject to completion of the following remaining tasks (recommended by Oikon, 2018):

- Excavation of PAH-contaminated soil in 2 locations
- Removal of the 'tar pit'
- Test and dispose of the waste produced
- Validation testing of remaining soil at the site

These tasks are relatively straightforward. The representative of the City indicated a sum of 1M kuna has been allowed for completion of these tasks, based on the Oikon 2018 estimate.

Contamination encountered during construction phase

Additional contamination is likely to be encountered during construction earthworks and excavations. The representative of the City indicated any contaminated soil would need to be managed in accordance with the remediation programme previously agreed with the regulator i.e. excavation and offsite disposal, or alternatively treatment so material could remain on site.

Contamination along the coast

In 2011 assessment of coastal contamination (soil, sediment and water) was undertaken prior to construction of the public beach to the south of the site and indicated quality was acceptable. No similar assessment has been undertaken adjacent to the site. Therefore there is a risk that contamination may be present along the coastal boundary of the site that will require remediation.

Remaining slag

The City of Šibenik intends that the slag remaining on site (mostly in the western area) is used as aggregate in road construction offsite and assumes this will take place at no cost. However this offsite removal for aggregate may not take place due to market conditions, resulting in the slag remaining a liability.

Clean cover in soft landscape areas

Clean cover (subsoil/topsoil) should be placed in all areas of soft landscaping (parks and gardens) to prevent risks to future site users from any remaining contamination.

Ground investigation coverage

Across the whole site less investigation (boreholes and trial pits, soil and groundwater samples) has been undertaken than would be required by the UK environmental regulator and therefore there is an increased risk that contamination will be encountered during construction phase.


A. Recommended remediation by Oikon 2018
B. Localized hotspots of soil contamination may be present across entire site
C. Contamination of coastal zone requires further assessment
D. Remaining slag requires removal offsite
E. Soft landscaped areas n final development must be covered with clean imported soil.
F. In ground obstructions present across entire site. Location of likely massive foundations and basements shown.

Remediation standards

The soil quality standards applied to remediation and agreed with the environmental regulator is based on Dutch standards as there are no Croatian standards for soil quality. The remediation standard for PAH applied to the hotspots is reasonable and comparable with that applied in the UK.

DESIGN ADAPTATION TO POTENTIAL CONTAMINATION RISKS

Underground facilities

It is expected that the parking for each plot will be mostly located underground, which will imply excavation of potentially contaminated soil and removal of in-ground structures such as foundations, slabs and other structures. High-density residential and hotels (likely to satisfy most of their parking requirements below ground) have been avoided in the former locations of large industrial buildings like furnace, where higher contamination and remaining underground structures is expected.

Adaptation to current topography

The site has steep slopes in the area close to the coast. The design has incorporated this level difference to the layout creating a platform for the waterfront development and proposing landscape solutions for the interface between the sea promenade and the platform, which increases the views and attractiveness of this area.

Cut and fill strategy

The introduction of a large green space in the design allows for a levelling strategy to relocate excavated material within the site limits, avoiding offsite disposal and creating an opportunity for developing an interesting landscape design in the open areas. Due to the inherent uncertainty in ground conditions at any brownfield site, additional contamination may be encountered during site development, such as in excavations for site reprofiling or foundations etc. Site levels and future development plots will be designed to minimise earthworks 'cut' and to achieve a cut/fill balance. This will reduce the likelihood of excavating contamination that will require offsite disposal but is acceptable to remain on site undisturbed.

Phasing

Construction will start on the southern part of the site, closer to the consolidated city. This will help to reduce the risk associated to the slag stored in the northern part of the site. It will provide more time to find a market for the material as aggregate, avoiding having to pay for off-site disposal.

CONTAMINATION AND GROUND-RELATED ABNORMAL COST ITEMS FOR DEVELOPMENT

The range of cost for the environmental remediation is between 530,000 € and 3,470,000 €, with a likely need of investment of 1,330,000 €. The uncertainties associated with this estimation, especially in the more costly items (B, C and F) could be reduced with additional studies:

- Further assessment of soil contamination with ground investigation across site. Approximate cost is approximately 100 to 150k euro (including boreholes and soil testing) and would inform geotechnical design as well as reducing contamination risk.
- Further assessment of the contamination of coastal water and beach area is recommended and should include soil and water sampling and testing for metals, hydrocarbons and phenols. Approximate cost of further assessment is around 30 to 60k €. If contamination was identified that required remediation this could include: excavation of contaminated soil and removal offsite; placing clean soils in soft landscape areas; covering contaminated soil with hard surfacing; groundwater interception trench and water treatment.

	A	B
Contamination or ground-related risk item	Remaining remediation activities required by the regulator: excavation of PAH-contaminated soil in 2 locations; removal of the 'tar pit'; test and dispose of the waste produced; validation testing of remaining soil at the site.	Additional soil contamination encountered during construction phase that requires remediation
Likelihood of occurrence	**High**	**High**
Estimated cost (euro)		400k
Cost range (euro)	140k	230k to 900k
Notes and possible actions to reduce uncertainty	The representative of the City indicated a sum of 1M kuna has been allowed for completion of these tasks. OIKON 2018 estimate 579k kuna	Assumes 500 to 2000 m^3 of contaminated soil is encountered during construction and requires disposal offsite. Cost is based on OIKON 2018 hazardous waste rates (3100 kn/m^3 for offsite disposal, equivalent to 434 €/m^3 or 694 €/tonne) and includes validation testing to demonstrate clean up. More ground investigation would reduce uncertainty. Further ground investigation across site would cost approx 100 to 150k € (including boreholes and soil testing) and would inform geotechnical design as well as reducing contamination risk. If contaminated soil could be retained on site (eg encapsulated beneath hardstanding or buildings) then the disposal cost could be avoided but would still need excavation, placement and validation testing.
Location and influence on phasing	Central and southeast areas of site (see plan) Works to be undertaken in advance of development	Localised hotspots of contamination could be present across the entire site and could be encountered during any excavation work. Ground investigation should be undertaken before designing the development plot elevations, as it may be possible to reduce the extent of excavation to avoid contamination and in-ground obstructions. For example basement car parks in residential areas should be avoided where there are massive in-ground obstructions or contamination. Development elevations should also be designed to enable retention of excavated contaminated soil on site.

	C	D
Contamination or ground-related risk item	Contamination of coastal water and beach area requires additional remediation	Remaining slag requires removal offsite
Likelihood of occurrence	**Low**	**Medium-High**
Estimated cost (euro)	300k	80k
Cost range (euro)	100 k to 1.5 M	0 to 80k
Notes and possible actions to reduce uncertainty	A report by Rudjer Boskovic Institute in 2011 on the future new city beach in 2011 showed no unacceptable contamination but the coast adjacent to the site has not been assessed. **Further assessment is recommended and should include soil and water sampling and testing for metals, hydrocarbons and phenols.** Approx cost of further assessment 30 to 60k euro. If contamination was identified that required remediation this could include: excavation of contaminated soil and removal offsite; placing clean soils in soft landscape areas; covering contaminated soil with hard surfacing; groundwater interception trench and water treatment. Cost estimate is highly uncertain however likelihood of the upper end of the range is very low.	Zero cost assumed if a market for the material as aggregate can be found, as anticipated by the representative of the City. If no market can be found then assume material requires disposal. Cost estimate based on OIKON 2014 estimate that 6000 m^3 remains and OIKON 2018 rate of 10 €/m^3 for non-hazardous waste excavation and disposal. Includes an allowance for validation after excavation and testing for waste disposal.
Location and influence on phasing	Entire length of site coastline should be assessed with particular focus on proposed new beach. It is recommended this is undertaken at an early stage as it will confirm if additional remediation work is required.	Most of the slag remains in the north part of the site. If this area was in a later phase of development it would give more time to find a market for the material.

	E	F
Contamination or ground-related risk item	Soft landscaped areas must be covered with clean imported soil layer (typically 600mm thickness)	In-ground obstructions require removal and processing (e.g. concrete crushing)
Likelihood of occurrence	**High**	**High**
Estimated cost (euro)	150k	400k
Cost range (euro)	100k to 250k	100k to 600k
Notes and possible actions to reduce uncertainty	68,000 sqm will be soft landscaped and requires imported clean cover; with a thickness of 0.6 m clean material. Assuming that standard landscape solution would include 0. 5m of new soil, and additional 0,1 has been estimated to be required to get full protection from soil contamination. Based on UK rates 20 €/m^3 to import and place clean soil. Should be reviewed based on Croatian rate and when proportion of soil covered areas is known.	Massive in-ground foundations may require breaking out and crushing where incompatible with proposed development. Concrete slabs and redundant utilities present across the entire site may need removal. Cost estimate taken from comparable recent UK site. Should be reviewed based on Croatian rates. More ground investigation, as noted in B would also reduce uncertainty in this item. Footprint of furnace buildings in northwest and southeast most likely to have massive concrete foundations.
Location and influence on phasing	All soft landscaped (vegetation or soil-covered) will need imported soil.	Former furnaces are likely to have massive concrete bases. In-ground obstructions may be present across the entire site. As above, development plot elevations should be designed to minimise avoid obstructions where possible.

	G
Contamination or ground-related risk item	Change in regulatory standards and requirements affects development
Likelihood of occurrence	**Low**
Estimated cost (euro)	-
Cost range (euro)	-
Notes and possible actions to reduce uncertainty	No known imminent changes to contamination regulation in Croatia. After construction any remaining contamination will be encapsulated at depth beneath the development so will not be risk to future users, except for coastal/beach area (see above). No cost assigned.
Location and influence on phasing	All soft landscaped (vegetation or soil-covered) will need imported soil.
TOTAL ESTIMATED COST	**1,330K**
TOTAL COST RANGE	**530K to 3,470k**

This assessment is based on documents provided by BDO and further communications with the representative of the City.

Sustainability strategy

Sustainability strategy

Urban sustainability is based on the need to balance urban and economic growth, improvement of the quality of life and prosperity with the limitation of natural resources and preservation of environmental and local values. The proposal aims to build Batižele regeneration upon a long term sustainable urban development vision, understanding sustainability as a three-pillar holistic concept – economic, social and environmental sustainability. Not only the new development will be financially viable, but it will also deliver socially and environmentally sustainable outcomes aligned with Šibenik's vision.

These three-dimensional sustainability cases are studied, outlining the generation of value of the proposed development and investment strategy:

THE CITY REGENERATION CASE

This case describes the expected net positive social impact that Batižele development will have on Šibenik city and region. Batižele will be a model of socially responsible urban development, including strategies for the preservation and enhancement of local identity and the attraction and retention of talent. It will be a diverse and multigenerational new part of the city, a walkable neighbourhood that offer streets, spaces and facilities for all ages, abilities and backgrounds to enjoy together, contributing to Šibenik's collective wellbeing

THE FINANCIAL CASE

Based on the results of the economic-financial study, this case describes the investment and financing strategy of the proposal and the way in which it is expected to deliver the objectives and priorities of stakeholders. It also outlines the strategies that will make Batižele become Šibenik's catalyser in its transition to a low carbon economy and green economy and contributor to a more de-seasonalized tourist offering and a more diversified economy, providing new employment opportunities. It will contribute to attraction of investment and the competitiveness of the whole city and region.

THE GREEN CASE

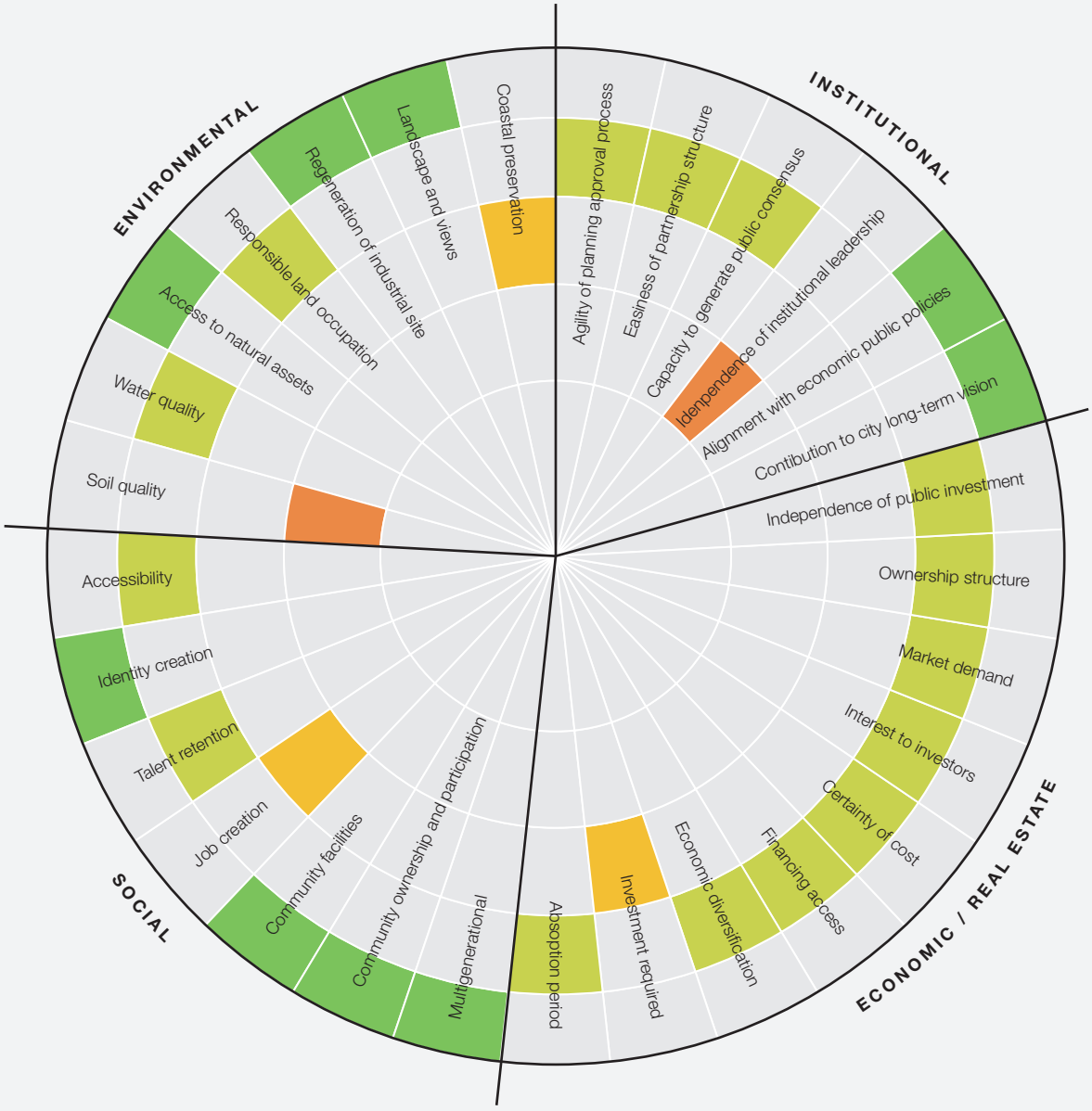
Further than the necessary environmental remediation strategy, already outlined, it describes the expected net impacts on the site and city's environment.

Batižele will be a positive environmental impact urban development. From a responsible land use, the proposal will provide high environmentally valuable areas and deliver a climate conscious and resource efficient urban development. It will position Šibenik as a referent of sustainable urban development.

Batižele delivers a responsible planning and design proposal that balances social, economic and environmental needs. The aim is to set a high responsible standard of sustainability in both the short and the long term.

The SPeAR® (Sustainable Project Appraisal Routine) tool enables the integrated three-dimensional – social, economic, environmental - assessment of sustainability. Apart from allowing scenario comparison, it will be a helpful tool to support informed decision-making and stakeholder participation, monitor and evaluate project sustainability performance or assess the implications of design changes throughout the planning and design process. It can also be used to undertake evaluation upon project completion, and during operation, which can inform organisational learning and approaches to future projects.

Sustainability has been a key driver throughout the design process to shape a proposal that will have positive environmental and socio-economic impacts for Šibenik city and region



SUSTAINABILITY STRATEGY

City regeneration case

Batižele development will be a referent of socially inclusive planning, with a diverse and multigenerational proposal that seeks to provide shared social benefits, opportunities and collective wellbeing for the whole Šibenik community while preserving and enhancing local identity.

The Batižele development has considered a social and inclusive approach where not only local values and identity will be preserved, but they will be enhanced as a central driver for the programmatic proposal, which will offer a good quality of life for the new residents and will share services and opportunities for the whole city.

LOCAL VALUES AND IDENTITY

Known as the first town founded by the Croatian people, Šibenik's authenticity is a priceless intangible heritage and key differentiator from other surrounding destinations oversaturated by tourism. The project will keep fostering the public intent to promote a respectful development, avoid overcrowding and overexploitation in order to maintain authentic local, natural and cultural values. Any promoted tourism will be based on living and experiencing the genuine local lifestyle, customs, nature and culture. The new district will offer a high quality of life and thriving opportunities for locals and at the same time offer the travellers the chance of submerging into the authentic Croatian lifestyle.

The proposal extends the city Šibenik on its west end and creates Batižele development to be experienced as a new piece of the existing city and at the same time a destination with a unique character, a new vibrant centrality as a counterpoint and twin to Šibenik old town. It will be fully integrated in the city and will blend harmonically with the surrounding landscapes. This integration will be maximized by the promotion of urban naturalization strategies and the proposal of urban typologies that inherit and update Šibenik old town and residential areas urban typologies.

The proposed uses strongly base on traditional and long-established activities such as gastronomy and wellness activities but update them, reinforcing Šibenik's local character and generating Batižele's own renovated identity with its own Wellness District and the Adriatic Culinary Centre.

Also, the development includes new facilities and social infrastructure in a proposal which responds to the city's existing facilities to cover current gaps and needs, complement the existing social infrastructure, offer services for the new residents but also offer shared services for the whole city.

The increase in cultural, health and wellness activities will translate into a vibrant new district that offers new spaces for all kinds of activities. Furthermore, the partition of both locals and tourists in these spaces and events will help develop a sense of belonging for the locals while allowing visitors to enjoy Batižele in a much more authentic way.

DIVERSE AND MULTIGENERATIONAL

The new urban development will be a referent of socially inclusive planning, promoting safe, inclusive, accessible public spaces for all, enabling contact with green areas to bring nature back into the community and providing shared and hybrid spaces to improve social and intergenerational interaction, cultural expressions and citizen participation.

As examples of future assets for an inclusive city life, the proposed public facilities (intergenerational, multipurpose and

educational) will become community hubs for interaction and exchange between the young and the old, and the community central park will provide opportunities for intergenerational activities, socialising, skills development and outdoor physical activity.

Climate adaptation and seasonal strategies will be considered for the design of public spaces to enhance outdoor comfort, specially addressing the needs of the most vulnerable population: children and aged communities. Also, the proposed urban layout enables an appropriate volume and varied range of housing typologies to favour a balanced, cohesive and diverse mix of social groups and different types of family patterns.

The inclusive planning approach will also be applied to shape the new tourist offering. Inclusive tourism is a growing sector within the industry that emphasizes the idea that tourism should actively strive to improve accessibility for all persons.

TALENT ATTRACTION AND RETENTION

Batižele will contribute to Šibenik city's demographic challenges related to a population that is both ageing and declining. The proposal has considered the needs of ageing population and considered a multigenerational approach, but it has also included attractors for young people, families and children, to contribute revert the current demographic trend, retaining local population.

Batižele development will offer a good quality of life and access to quality leisure and education for its new inhabitants and for current Šibenik residents and will also benefit coming generations providing them with new thriving opportunities.

The aim is for Šibenik people to take ownership of Batižele and feel it as a new place to live, work and spend their free time. Sense of ownership will be strengthened by the promotion of collaborative processes, community-based participation and placemaking such as the development of public realm through co-creation in order to maximize shared value.

The proposal to build a Health and Wellness Facility results in a clear commitment to attracting talent and highly qualified professionals in the field of medicine, personal health, well-being and care. Besides, the specialized training offering with the Adriatic Culinary Centre could also be an interesting attractor for new generations.

Therefore, the proposal seeks to attract trained professionals in the health sector that, in synergy with the hotels and gastronomic uses, will generate a synergistic effect that will activate the local economy and correct current demographic imbalances.

WELLBEING AND QUALITY OF LIFE

Batižele will be a model of a walkable urban area that reconnects the people to the green areas and natural spaces and provides them with places to rest and exercise.

The mobility strategy is aimed to develop a vibrant, pedestrian-friendly urban area to become a safe environment for everyday activities and socialising, strolling and outdoor life. Also, for visitors walking is the best way to feel a city both in a recognizable and memorable way. Thus, priority has been given to pedestrian areas, and road traffic has been limited to the main structuring road network together with pedestrian streets with shared scheduled and limited access for visitors, residents and emergency services.

To promote not only sustainable but also healthy and active mobility, a network of bicycle lanes and pedestrian routes has been planned connecting main places of interest and green areas. This strategy allows the combination of zero-emission transport, and its contribution to the improvement of local air quality, with the integration physical activity in everyday life. As already mentioned, the proposal seeks to promote a model of tourism and healthy living. That is why the sanitary facilities (hospital, health and wellness centre) and sports facilities (multifunctional facility) are particularly relevant, complementing the active leisure spaces in the central park.

The new development will contribute to Šibenik collective well-being fostering its access and reconnection with its green and blue natural assets. Šibenik city waterfront dialogue will be enhanced with the extension of its waterfront, the extension of Banj beach and the rehabilitation of Batižele's coastline, extending the pedestrian itinerary that, departing from the recently extended and reconfigured Vrulje Quay passenger terminal, connects the site with Šibenik old town. This seafront itinerary will be connected with the network of green areas that structure the new development, also connecting the city with the natural areas, hiking and cycling routes. The proposed green areas will become places for respite, integrating natural beauty in urban life and contributing for a better air quality and healthier lifestyle.

Financial case

Batižele development will deliver positive economic impacts to the whole Šibenik city and region, generating new jobs and opportunities, fostering local economy and entrepreneurship, contributing to the de-seasonalization of tourist sector and to the transition to a more diversified sustainable and resilient economy.

The highly aspirational environmental and social values of the proposal necessarily have to be economically feasible to enable an effective implementation of the vision. Feasibility of the investment and financing strategy is demonstrated though the economic- financial study. But once again the proposal exceeds mere viability to deliver positive economic impacts to Šibenik city and region. Batižele development will imply the generation of new jobs for the local workforce and suppliers during its construction and once completed, fostering local economy and entrepreneurship, offering thriving opportunities for the new generations, and attracting business investment capable of creating new jobs for the whole city economic regeneration.

STRENGTHENING AND DE-SEASONALIZING THE TOURIST SECTOR

The new employment offering will strengthen tourism, as key engine of Šibenik's economic growth. The aim is not to drastically increase the number of visitors, especially on peak season, as the authentic and non-massified tourist experience is wanted to be preserved. The aim is to generate more diversified and off-season activities that contribute to the growth of the tourist sector in a more de-seasoanalized way. The proposal's character is designed to attract a wide range of people beyond the sun and beach tourists, such as health and wellness travellers (seeking for specialized health treatments), gastronomy motivated travellers, "bleisure" visitors (people mixing leisure and business, incentive travel, congresses) or digital nomads (online workers who seek a good quality of life destination to telework from). The goal is to create an all year round high quality offering.

ECONOMIC DIVERSIFICATION

Also, tourism will be complemented with other potential economic activities to contribute to the transition to a more diversified, de-seasonalized, low carbon and long-term sustainable economy. The new urban development will foster the generation of economy resilience and diversification by promoting complementary activities based on local values, off-season activities and complementary hybrid uses aimed for both Šibenik visitors and for the local community. Activities to complement tourism are proposed in the frame of blue and green economies including potential activities linked to health, well-being, personal care, contact with nature, gastronomy, green and blue energy or the use of marine and natural resources.

All these proposed uses strongly linked to traditional productive sectors and bringing local production with gastronomic services will boost local economy, promote a more circular economy approach and at the same time enhance and preserve local values and identity. In parallel, all the high added value activities, anchors and highly environmental areas will be strategically located to unlock investment throughout the phasing.

ŠIBENIK AS A GREEN DESTINATION

The new development will enhance the city's unique tourist offering, and strengthen Šibenik position as a Green Destination. Being the region's strongest economic sector, tourism has to lead the Green Economy Transition trough the proposal of a new development aimed to attract sustainable hotel operators. Traditional ecotourism gives tourists a chance to observe nature up close and enjoy its health benefits. Batižele ecotourism shares the same goals, but just one step from the heart of the city, offering both natural and urban experiences with a highly landscape integrated and environmental responsible Wellness District as well as an ecologically operated business hotel and urban hotel.

Šibenik should not only aim to be known as a Green Destination but also as an exporter of green tourism services. Batižele will also include educational facilities linked to tourism and to gastronomic culture to help Šibenik development as exporter of high quality and sustainable tourism and hospitality services.

The city's participation in an internationally recognised certification scheme for sustainable tourism could enhance its competitiveness, international recognition and visibility to maximize investment attraction potential. Located in a region well-known for its high-water cleanliness and quality standards, and with an already Blue-Flag awarded beach, Šibenik city and its new Batižele expansion city could be a perfect candidate for QualityCoast awards, especially created for seaside and waterfront destinations. EarthCheck or Biosphere Tourism certifications could also valuable standards and frameworks for Šibenik city to monitor and report the expected for sustainable tourism outcomes with international projection.

POTENTIAL INCOME

Residential sales revenue (gross income) with accompanying commercial segment shows potential revenue range from sale of all apartments and rent of commercial premises. The income from public and social infrastructure was calculated in a separate chapter. Rental income is based on range of potential rents per segment and it is calculated on the base of total development.

Sales and rental calculations are based on net areas which are on average approximately 80% of assumed gross floor area (GFA).

All prices and rents are shown excluding VAT and do not include indexation.

The following abbreviations are used:

- NLA represents net leasable area
- ADR represents average daily room rate
- MV represents Market Value
- WAR represents weighted average rent per sqm per month

Range of potential rental revenue for commercial segments and sales income for residential segment are shown in table below.

				Range		Total sales Revenue	
Residential	**GFA**	**NLA**	Type	Min	Max	Min	Max
Luxury apartments	4,200 sqm	3,150 sqm	Sales price	€ 2,000	€ 2,500	€ 6,300,000	€ 7,875,000
High density apartments	30,300 sqm	22,725 sqm	Sales price	€ 1,300	€ 1,500	€ 29,543,000	€ 34,088,000
Medium density apartments	48,000 sqm	36,000 sqm	Sales price	€ 1,300	€ 1,500	€ 46,800,000	€ 54,000,000
Single housing units	18,000 sqm	15,300 sqm	Sales price	€ 900	€ 1,200	€ 13,770,000	€ 18,360,000
Total	**100,500 sqm**	**77,175 sqm**				**€ 96,413,000**	**€ 114,323,00**

				Range		Yearly revenue range	
Hotel	**GFA**	**Units**	Type	Min	Max	Min	Max
Convention Centre + Hotel	15,800 sqm	200	ADR	€ 120	€ 150	€ 6,074,000	€ 7,592,000
Waterfront Hotel	7,200 sqm	100	ADR	€ 150	€ 200	€ 3,504,000	€ 4,672,000
Urban Hotel	10,800 sqm	180	ADR	€ 90	€ 120	€ 3,104,000	€ 4,139,000
Total	**33,800 sqm**	**480**				**€ 12,682,000**	**€ 16,403,000**

				Range		Yearly revenue range	
Retail	**GFA**	**NLA**	Type	Min	Max	Min	Max
Ground floor retail	7,200 sqm	5,400 sqm	WAR	€ 6.0	€ 12.0	€ 389,000	€ 778,000
Ground floor restaurants	5,000 sqm	3,750 sqm	WAR	€ 9.0	€ 15.0	€ 405,000	€ 675,000
Total	**12,200 sqm**	**9,150 sqm**				**€ 794,000**	**€1,453,000**

To reach the net operating income we deducted the costs per segment. The following inputs were used for hotel:

	Used inputs		
Hotel	% of Room Rev	Occupancy	EBITDA margin
Convention Centre + Hotel	75%	52%	36%
Waterfront Hotel	75%	48%	34%
Urban Hotel	80%	42%	34%

Non-recoverable expenses for ground floor retail and ground floor restaurants were assumed at 10%.

To reach the Market Value we capitalized the Net Operating Income with prevailing cap rates on the market, 8.0% for hotels and 8.5% for Retail units.

The table below presents potential annual income taking into consideration average operational costs for the envisioned types of properties. The public/semi-public facilities have borderline or slightly negative profitability and are not assumed to be sold on the market.

Total undiscounted **Gross Development Value** of the project which includes sales revenue of residential segment and Market Value at stabilization of hotel and retail components is **estimated between €160 million and €201 million**, in the period of 15 years. It is important to note that the model is very sensitive to changes in inputs.

	Net Operating Income		Potential MV at Stabilization		Potential MV per unit	
Hotel	GFA	Units	Min	Max	Min	Max
Convention Centre + Hotel	€ 2,187,000	€ 2,733,000	€ 27,337,500	€ 34,162,500	€ 136,688	€ 170,813
Waterfront Hotel	€ 1,191,000	€ 1,588,000	€ 14,887,500	€ 19,850,000	€ 148,875	€ 198,500
Urban Hotel	€ 1,055,000	€ 1,407,000	€ 13,187,500	€ 17,587,500	€ 73,264	€ 97,708
Total	**€ 4,433,000**	**€ 5,728,000**	**€ 55,412,500**	**€ 71,600,000**	**€ 115,443**	**€ 149,167**

	Net Operating Income		Potential MV at Stabilization		Potential MV per unit	
Retail	**GFA**	**NLA**	Type	Max	Min	Max
Ground floor retail	€ 350,000	€ 700,000	€ 4,118,000	€ 8,235,000	€ 763	€ 1,525
Ground floor restaurants	€ 360,000	€ 610,000	€ 4,235,000	€ 7,176,000	€ 1,129	€ 1,914
Total	**€ 710,000**	**€ 1,310,000**	**€ 8,353,000**	**€ 15,411,000**	**€ 913**	**€ 1,684**

CONSTRUCTION COSTS

Construction costs for the project are estimated according to the prevailing market conditions for the planned building type. However, we are not experts in estimating construction costs so please take the values below as indicative. We would strongly recommend the Client to seek an expert's advice in this matter. The construction costs for environmental remediation as well as for public and social infrastructure was calculated in a separate chapter.

The construction costs of the buildings include hard costs, soft costs and contributions (communal and water contributions). Total commercial segment costs not including financing range between €127 and €166 million (exc. contingency budget, developer's profit and VAT).

		Cost per sqm		Development cost	
Residential	**GFA (incl. underground)**	Min	Max	Min	Max
Luxury apartments	5,670 sqm	€ 1,100	€ 1,400	€ 3,465,000	€ 4,410,000
High density apartments	40,905 sqm	€ 800	€ 1,000	€ 18,180,000	€ 22,725,000
Medium density apartments	64,800 sqm	€ 800	€ 1,000	€ 28,800,000	€ 36,000,000
Single housing units	18,000 sqm	€ 700	€ 850	€10,710,000	€ 13,005,000
Total	**129,375 sqm**	**-**	**-**	**€ 61,155,000**	**€ 76,140,000**

		Cost per sqm		Development cost	
Hotel	**GFA (incl. underground)**	Min	Max	Min	Max
Convention Centre + Hotel	22,800 sqm	€ 1,200	€ 1,800	€ 27,360,000	€ 41,040,000
Waterfront Hotel	7,200 sqm	€ 1,300	€ 1,800	€ 9,360,000	€ 12,960,000
Urban Hotel	17,100 sqm	€ 1,000	€ 1,300	€ 17,100,000	€ 22,230,000
Total	**47,100 sqm**	**-**	**-**	**€ 53,820,000**	**€ 76,230,000**

		Cost per sqm		Development cost	
Retail	**GFA (incl. underground)**	Min	Max	Min	Max
Ground floor retail	8,640 sqm	€ 800	€ 1,000	€ 6,912,000	€ 8,640,000
Ground floor restaurants	6,000 sqm	€ 800	€ 850	€ 4,800,000	€ 5,100,000
Total	**14,640 sqm**	**-**	**-**	**€ 11,712,000**	**€ 13,740,000**

COMMERCIAL SEGMENT COSTS	**€ 127,000,000**	**€ 166,000,000**

The table on the right indicates potential profit margin of the project around 20%, which does not include the public and social infrastructure, environmental remediation and land acquisition costs.

TFE site commercial segment profit margin		
	Min	Max
GDV	€ 160,000,000	€ 201,000,000
Construction costs	€ 127,000,000	€ 166,000,000
Profit margin	€ 33,000,000	€ 35,000,000
Margin	21%	17%

The values above are indicative and not discounted to today's value.

PUBLIC AND SOCIAL INFRASTRUCTURE

The following chapter will give indication to revenue and cost side of public and social infrastructure including environmental remediation required prior to development.

The table below shows potential revenue generated by public and semi-public facilities including two parking buildings.

Weighted average rent is considerably lower compared to retail premises due to public component. The parking building would enable short term parking place rental, but for simplicity, we assumed the value per parking space in line with cash flows from short term rents.

				Range		Total sales Revenue	
Facilities	**GFA**	**NLA**	Type	Min	Max	Min	Max
Adriatic Culinary Centre	2,250 sqm	1,688 sqm	WAR	€ 1.0	€ 3.0	€ 20,000	€ 61,000
Multigenerational facility	1,000 sqm	750 sqm	WAR	€ 2.0	€ 4.0	€ 18,000	€ 36,000
Multifunctional facility	1,980 sqm	1,485 sqm	WAR	€ 1.0	€ 3.0	€ 18,000	€ 53,000
Health facility	7,920 sqm	5,940 sqm	WAR	€ 2.0	€ 4.0	€ 143,000	€ 285,000
Educational facility	800 sqm	600 sqm	WAR	€ 0.0	€ 0.5	€ 0	€ 4,000
Total	**13,950 sqm**	**10,463 sqm**				**€ 199,000**	**€ 439,000**

				Range		Yearly revenue range	
Garage	**GFA**	**Places**	Type	Min	Max	Min	Max
Parking building 1/ Cable car station	9,100 sqm	230	WAR	€ 60	€ 80	€ 165,600	€ 220,800
Parking building 2	9,000 sqm	300	WAR	€ 50	€ 70	€ 180,000	€ 252,000
Total	**18,100 sqm**	**530**				**€ 345,600**	**€ 472,800**

To reach the net operating income we deducted the costs per segment. The following inputs were used:

The facilities were assumed to have monthly expenses at €2.0/sqm/month for Adriatic Culinary Centre, Multigenerational facility and Educational facility. Multifunctional facility expenses are assumed at €3.0/sqm/month, while Health facility expenses are assumed at €4.0/sqm/month. Overall they would not be profitable or would be borderline profitable in case only the building associated costs are assumed (not including cost of preparing events, employed persons, etc.)
On the other hand, we assumed a €2.5/sqm/month operating expenses for the Parking building 1/Cable car station and €2.0/sqm/month operating expenses for the Parking building 2.

To reach the Market Value we capitalized the Net Operating Income with prevailing cap rates on the market, for parking buildings at 6.0%. The public facilities are not envisioned to be sold on the market.

	Net Operating Income	
Facilities	Min	Max
Adriatic Culinary Centre	-€ 20,500	€ 20,500
Multigenerational facility	€ 0	€ 18,000
Multifunctional facility	-€ 35,460	-€ 460
Health facility	-€ 142,120	-€ 120
Educational facility	-€ 14,400	-€ 10,400
Total	**-€ 212,480**	**€ 27,520**

	Net Operating Income		Potential MV at stabilization		Potential MV per place	
Garage	Min	Max	Min	Min	Min	Max
Parking building 1/ Cable car station	€ 50,600	€ 105,800	€ 843,000	€ 1,763,000	€ 3,665	€ 7,665
Parking building 2	€ 60,000	€ 132,000	€ 1,000,000	€ 2,200,000	€ 3,333	€ 7,333
Total	**€ 110,600**	**€ 237,800**	**€ 1,843,000**	**€ 3,963,000**	**€ 3,477**	**€ 7,477**

Construction costs of public and social infrastructure was estimated according to the prevailing market conditions for the planned building type. However, we are not experts in estimating construction costs so please take the values below as indicative. We would strongly recommend the Client to seek an expert's advice in this matter.

		Cost per sqr		Construction cost	
Facilities	**GFA (incl. underground)**	Min	Max	Min	Max
Adriatic Culinary Centre	3,038 sqm	€ 700	€ 900	€ 2,126,250	€ 2,733,750
Multigenerational facility	1,350 sqm	€ 600	€ 800	€ 810,000	€ 1,080,000
Multifunctional facility	2,673 sqm	€ 1,100	€ 1,500	€ 2,940,300	€ 4,009,500
Health facility	10,692 sqm	€ 1,200	€ 1,800	€ 12,830,400	€ 19,245,600
Educational facility	1,080 sqm	€ 700	€ 900	€ 756,000	€ 972,000
Total	**18,833 sqm**	**-**	**-**	**€ 19,462,950**	**€ 28,040,850**

		Cost per sqm		Construction cost	
Garage	**GFA (incl. underground)**	Min	Max	Min	Max
Parking building 1/ Cable car station	9,100 sqm	€ 300	€ 500	€ 2,730,000	€ 4,550,000
Parking building 2	9,000 sqm	€ 300	€ 500	€ 2,700,000	€ 4,500,000
Total	**18,100 sqm**	**-**	**-**	**€ 5,430,000**	**€ 9,050,000**

		Cost per sqm		Construction cost	
Infrastructure costs	**Land surface**	Min	Max	Min	Max
Beach extension	3,800 sqm	€ 30	€ 80	€ 114,000	€ 304,000
Waterfront existing platform	13,300 sqm	€ 80	€ 120	€ 1,064,000	€ 1,596,000
Roads	46,100 sqm	€ 100	€ 200	€ 4,610,000	€ 9,220,000
Pedestrian areas	19,600 sqm	€ 125	€ 250	€ 2,450,000	€ 4,900,000
Central park + green areas	41,400 sqm	€ 40	€ 80	€ 1,656,000	€ 3,312,000
Environmental Remediation	-	-	-	€ 530,000	€ 3,470,000
Total	**124,200 sqm**	**-**	**-**	**€ 10,400,000**	**€ 22,800,000**
PUBLIC AND INFRASTRUCTURE COSTS				**€ 35,000,000**	**€ 60,000,000**

Total public and social infrastructure costs including environmental remediation are estimated between €35,000,000 and €60,000,000. We assume that the local/ national government would be the sole developer of these projects, but would also be able to apply for financing at international institutions such as EU Cohesion Fund.

SUSTAINABILITY STRATEGY

Green case

Batižele will be an example of highly ambitious sustainable development, showcasing the compatibility between urban growth and high environmental values in a landscape integrated, climate conscious and resource efficient proposal.

Environmental sustainable principles have driven the proposal throughout the process to shape Batižele urban development as a referent in sustainable development.

The environmental sustainability aspirations are far beyond the necessary environmental remediation strategy, with the aim of restoring, strengthening and enhancing the site's environmental values as one of the key features for the generation of high value proposal.

The new urban development will be a model of urban climate adaptation and responsible consumption of natural resources: land, energy, water and materials. Also, all the proposed environmental sustainability strategies will generate associated social and economic positive impacts to improve the competitiveness and wellbeing of the city.

RESPONSIBLE LAND USE

The regeneration of brownfield areas has an intrinsically lower impact than greenfield developing. The Batižele development not only avoids consuming further natural land but it also contributes to regenerate a degraded and under-used land which is close to Šibenik urban centre and whose regeneration will have a positive impact for the whole city.

The proposed land use scheme avoids intensively building the whole area and unlocks new valuable green areas that reconnect Šibenik waterfront northwest end with the natural areas in the North. It concentrates density near the waterfront, pairing Šibenik's old town, and blends in with its natural and urban surroundings through lower density development areas.

First, a dense urban development makes better use of land, a very limited resource. But also, the proposed density contributes to maximize resource efficiency through optimizing the investment in infrastructure of services (supply, sanitation, energy transport), transport (public and road networks), and social (health, educational, cultural equipment). It contributes to a more sustainable growth model.

POSITIVE ENVIRONMENTAL IMPACT URBAN DEVELOPMENT AND LANDSCAPE INTEGRATION

Environmental values are no longer an asset to be preserved and not damaged, they are a key asset that translates into great socio-economic benefits. The proposal aims beyond a low environmental impact development towards a positive environmental urban development. It will transform an industrial site into an area of high environmental values - from grey to green.

In addition to carrying out the necessary land remediation and decontamination works, the proposal is structured through a central spine of green areas that will re-connect the city with the natural hilly areas in the North. This spine will be materialised through a concatenation of green areas grading from a more urban park to a naturalized and more rural park that integrates with Smričnjak hill. These green areas will seek to restore and promote local biodiversity and environmental integrity though the use of native natural vegetation.

The development will become a new environmental asset integrated in the regional network of natural areas and valuable landscapes and benefit from privileged views to

all these natural assets, enjoying a privileged panoramic of Šibenik bay, Krka estuary, St Anthony Channel and its protected landscapes.

Landscape integration is a fundamental principle of the proposal, to showcase the compatibility between the urban and natural world, between urban growth and environmental growth. For a gradual landscape integration, density is gradually reduced from the lively waterfront both towards the hills and natural areas and towards the single housing urban fabric adjacent to the site, blending in with its natural and urban surroundings. Also, urban naturalization strategies, as green roofs, urban roof gardens and green facades will be promoted to maximize Batižele's landscape and environmental integration.

CLIMATE CONSCIOUS URBAN DESIGN

Batižele proposal has been forged taking into consideration Šibenik's topo-climatic conditions with a double aim. On the one hand maximization of outdoor comfort will enable the proposed all year round vibrant new part of the city, with active streets, squares and parks and the highly walkable proposed model, with a great focus on pedestrian and cyclist mobility. On the other hand, the proposed street proportions will provide the future buildings with appropriate access to environmental resources (sun and wind) as the basis for passive design and the first step of the low carbon energy proposal. The integration of urban bioclimatic and building passive design strategies will substantially increase the number of annual hours within the comfort zone, without the need of active systems and subsequent energy consumption thanks to optimized building envelopes with adaptative shading solutions and enabling daylight and natural ventilation.

The city has a mild, and generally warm and temperate yet seasonal climate. During the colder part of the year, the Krka River valley is exposed to north-easterly (bora) and south-easterly (scirocco or jugo) winds, where the bora wind is prevalent throughout the entire area, while the jugo wind usually only blows in the lower course of the Krka River. In summer, a gentle, daytime westerly (mistral) or south-westerly breeze develops on clear days. Sun altitude at midday ranging from 69º in summer solstice to 23º in winter solstice, and around 45º around equinoxes, will influence urban and building design for a seasonal shading strategy.

These city's seasonal conditions translate into a double-need seasonal approach for urban design:

- Hottest months, during summer season, will require maximization of shaded areas and wind exposure for outdoor comfort. Buildings also have to maximize their envelope shading solutions to reduce energy consumption for cooling, and enable natural ventilation strategies, especially during night hours.
- Intermediate, spring and autumn, months will have pleasant conditions for outdoor activities without the need of additional bioclimatic strategies and will barely require heating or cooling systems for indoor conditioning.
- Coldest months will benefit from sun exposure in public spaces and solar gains in hotels and residential buildings to reduce energy consumption for heating. Wind mitigation strategies are needed to enhance outdoor comfort complementing sun exposure.

The proposed urban layout responds to these complex necessities. The planned streets will maintain a rather narrow proportion to guarantee the provision of the naturally shaded areas needed to enhance outdoor comfort in the hottest months. North-South oriented main streets and public spaces are needed to ensure midday sun exposed areas in winter (as East-West oriented streets will barely enable winter morning and afternoon low sun rays), while they will be appropriately shaded through vegetated or temporary solutions during summer.

Deciduous vegetation and temporary and seasonal shading or wind mitigation solutions will be necessary support strategies for a year-round climate adapted urban design. During hottest months, those trees will provide a beneficial shade to

public spaces, whereas during colder months they will allow beneficial sun exposure. Surrounding hills will naturally provide the site with from the coldest months' prevalent winds, north-easterly (bora) and south-easterly (scirocco or jugo) winds. Also, an appropriate range of different scale public spaces will guarantee optimal activated spaces throughout the year. In the hottest months, narrower streets and vegetation shaded squares and green areas will provide comfortable conditions for outdoor life. In the coldest months, the wider, south oriented public spaces, such as the main streets and central green area, will provide the best outdoor conditions.

The proposed urban layout enables future buildings maximization of North-South orientations, which are optimal for a seasonal performance and an optimized envelope, as they are easily shaded in summer and allow solar gains in winter. At the same time west oriented facades, which promote unwanted overheating in summer and are scarcely beneficial for solar gain in winter, will be avoided or solved with strategies as ventilated and vegetated facades.

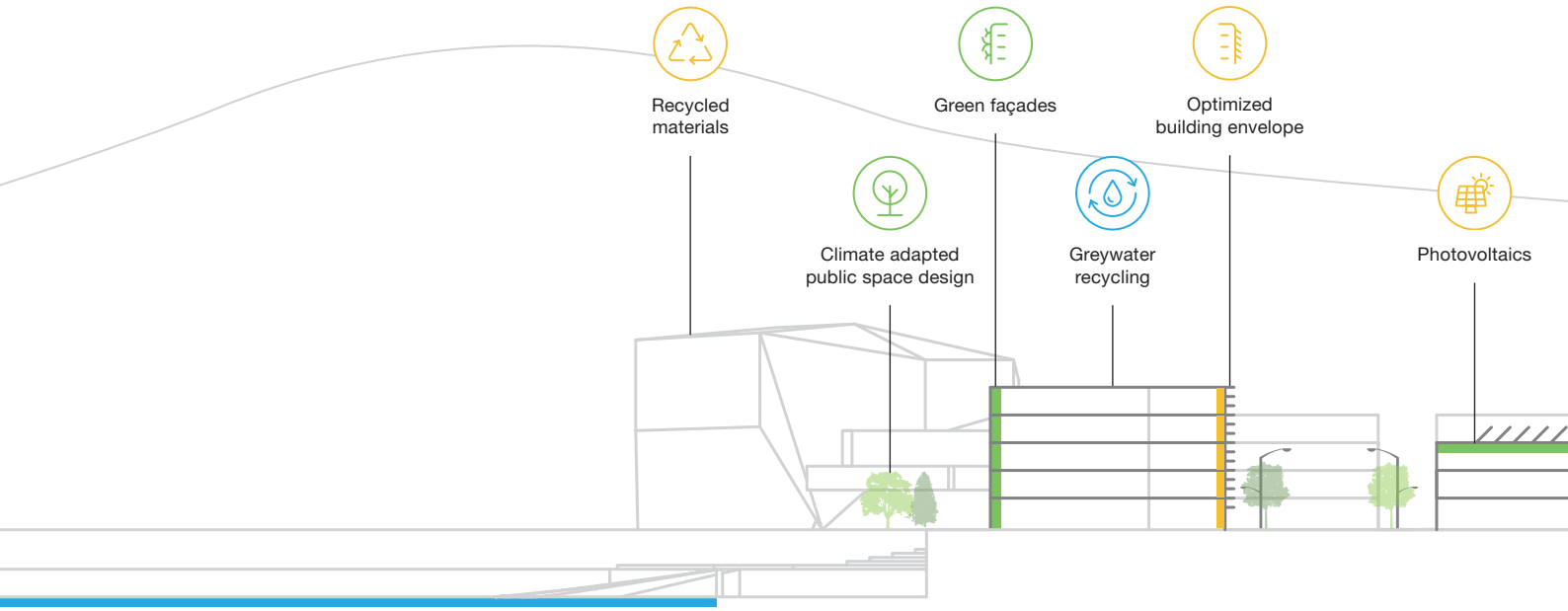
The proposal has also considered the climate change scenario aligned with Šibenik's long term vision and contribution to the area of adaptation to climate change, internationally recognised with the "Mediterranean Climate Change Adaptation Award" received in May 2019.

Batižele proposal integrates nature-based solutions to respond to the climate change challenges. The urban naturalization strategies and green infrastructure proposed will have beneficial effects to mitigate urban heat island effect, together with the promotion of light coloured pavements. The green infrastructure, together with the sustainable drainage strategy, will also translate into a more efficient runoff management, necessary to address the water related climate change scenario, with more extreme climate phenomena such as storms and heavy rains, together with longer and more extreme dry period which set the necessity of preserving the water resource.

RESOURCE EFFICIENT URBAN DEVELOPMENT LOW CARBON

With the aim of promoting a low carbon development, the project proposes a responsible energy and materials strategy. Its low carbon energy model is based on a three stepped strategy:

1. The first step relates to the already mentioned bioclimatic strategies as key drivers of the design from early stages. The creation of a climate adapted urban design, which takes advantage of the topo-climatic conditions optimizing both wind and sun exposure, lays the groundwork for passive buildings with a reduced energy demand.
2. The second step is based on maximization of efficiency of urban infrastructures and of the buildings systems and, more importantly, the maximization of the shared efficiency between the different uses. These uses will not be approached as independent pieces but planned as part of a coordinated and symbiotic energy system with synergies and win-win relationships.
3. The third and last step is the integration of renewable energy generation, together with energy storage strategies and a smart management, to enable the highly efficient systems meet the low energy demands with clean and



innovative energy. Green roof strategies will enhance the building performance and foster landscape integration, and at the same will be combined with solar thermal and photovoltaic systems for renewable energy generation.

Together with the energy strategy, a low carbon materials strategy is proposed. It is firstly based on maximizing the new urban development life cycle. A flexible mix of uses and typologies proposal, multifunctional and intensive facilities that allow urban dynamization throughout the day and throughout the year and enable easy adaptation, avoid the need of demolition and rebuilding, maximizing the functionality of the built environment and infrastructures and making the most of the investment. In addition, a responsible use of building materials should be promoted through future urban policies, encouraging the use of local materials, which have fewer transport related emissions and contribute to boost local economy, as well as the use of recycled materials or responsible extracted and manufactured materials, as FSC and PEFC woods. Policies should also be developed for an efficient waste management, to maximize its reuse and recycling in the transition to a more circular economy.

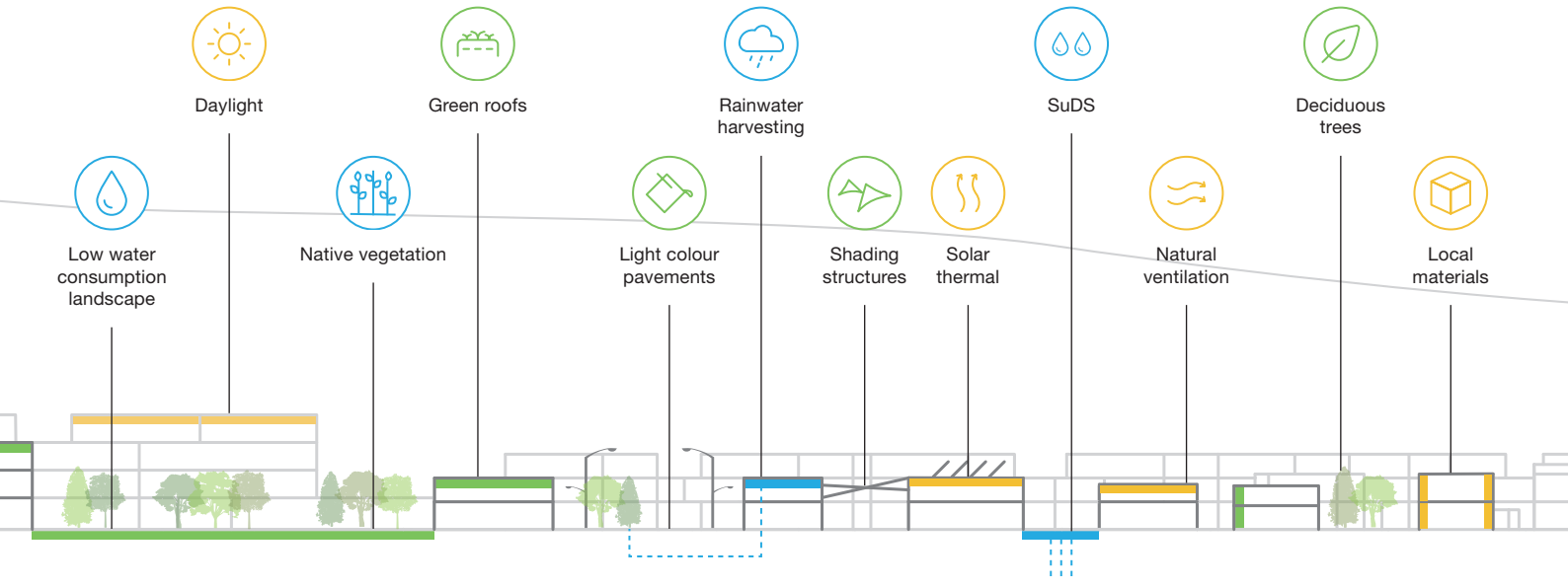
RESOURCE EFFICIENT URBAN DEVELOPMENT
WATER SENSITIVE

The Batižele water sensitive approach translates into a proposal which integrates the whole water cycle, including storm water, groundwater and wastewater management and water supply, to minimise its environmental impact.

The physical adaptation proposal will consider the natural runoff pathways and adapt to them as the key decision for a sustainable drainage strategy, which will be complemented with the maximization of vegetated areas and pervious pavements together with the integration of sustainable drainage systems (SuDS).

SuDS will be integrated throughout the development, in multi-functional spaces such as car parks, footpaths and verges, gardens, landscaped areas, driveways, courtyards or communal spaces. These solutions minimize the development impact on local hydrology, mimicking natural drainage by: temporarily storing peak runoff for filtering and later slow release (attenuation), as wells as rainwater harvesting for later reuse and/or infiltration. Green areas will mitigate flood risk and damage thanks to this integrated runoff management.

Efficient use of water resources will be promoted in the future public spaces and buildings. Landscaped areas will be designed following xeriscape principles, with the use of native and adapted vegetation, reduction of turf areas and promotion of low consumption and low maintenance vegetated areas supplied by efficient irrigation systems and recycled water. Rainwater harvesting and reuse, and greywater recycling, will be promoted in the buildings for a whole water cycle approach. These strategies will reduce the burden on local sewage systems and will provide alternative regenerated water resources for compatible uses such as irrigation or toilet flushing, reducing water potable consumption.



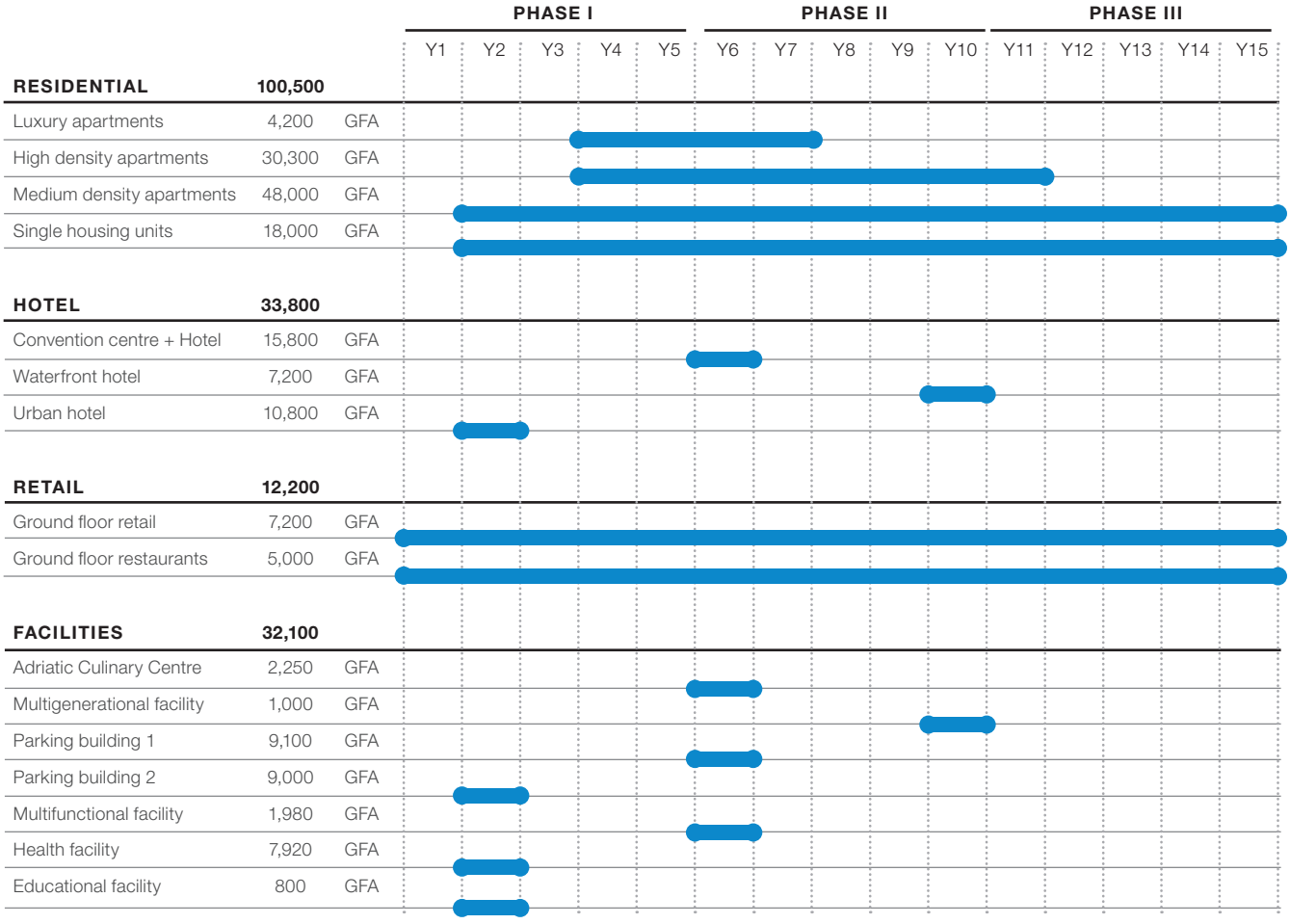
Implementation strategy

Phasing

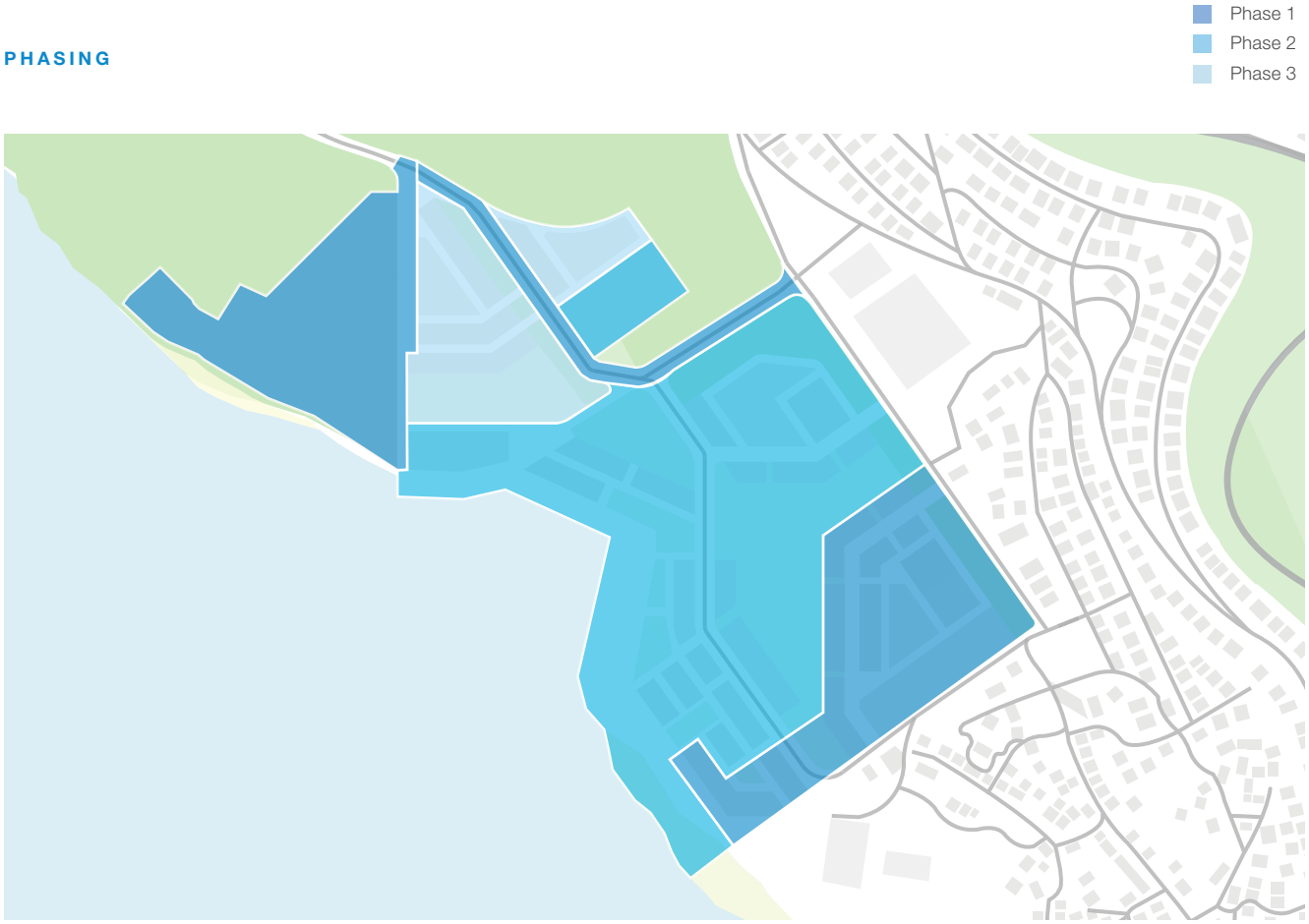
The full absorption of the project is expected to take 15 years. For this period, the project could be phased as follows:

- **Phase 1.** It is proposed that the develoment will start with the southeastern low-medium density residential area and also with one of the Hotels (Urban Hotel), which is close to the existing swimming pool facilities and consolidated city neighbourhoods. Starting with this development will allow generating some revenue with minimum investment in urbanization. In parallel, if an investor is found, the Wellness District in the northern part of the site could be developed, again with minimum investment, together with the parking building associated with it.
- **Phase 2.** This phase would include the development of the Batižele Waterfront, with a mixed-used development including residential, two hotels (Waterfront and Convention Centre hotels), ground-floor retail and restaurants, and the Adriatic Culinary Centre. Also, another pocket of medium and low density residential may be developed, close to the existing football field. This phase will also include the extension of the waterfront, the construction of the main street and the urban side of the central park. In order to provide service to the residential demand. Due to the increase in residents expected in this phase it may also be interesting to build the multifunctional facility for sport and cultural events.
- **Phase 3.** A final phase will include the remaining residential areas including the facilities associated like the rest of the Central Park.

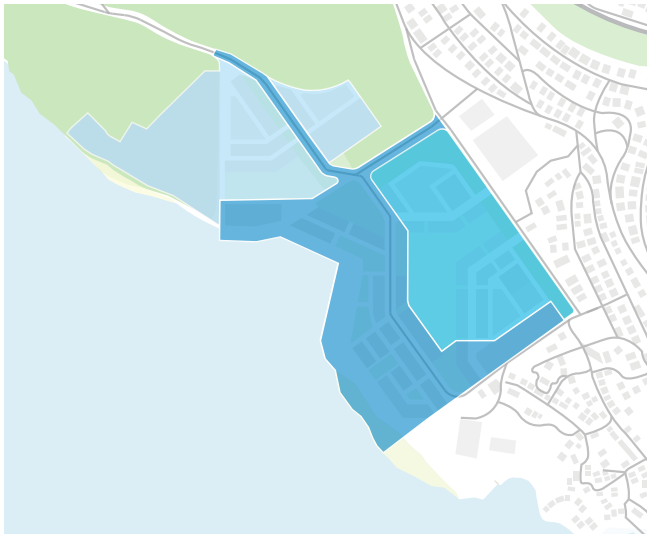
This is just a possible phasing based on expected absorption per use, subject to changes in market demand, developer priorities or public needs. We also want to highlight that alternative phasings are possible to adapt to these changes which increases project resilience.



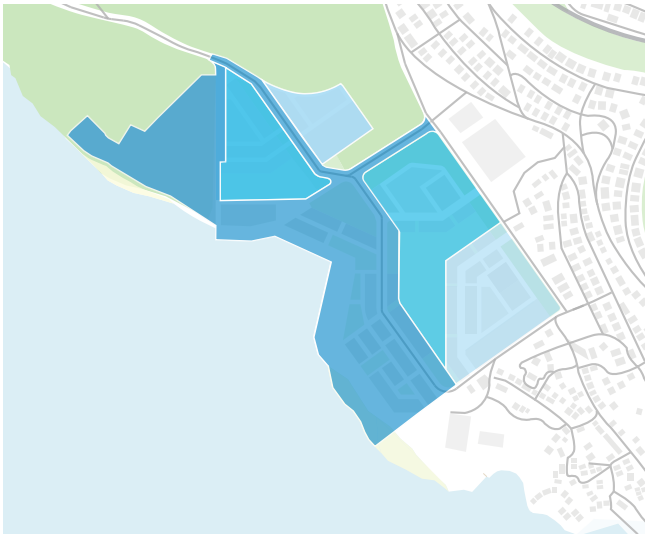
PHASING



ALTERNATIVE PHASING A

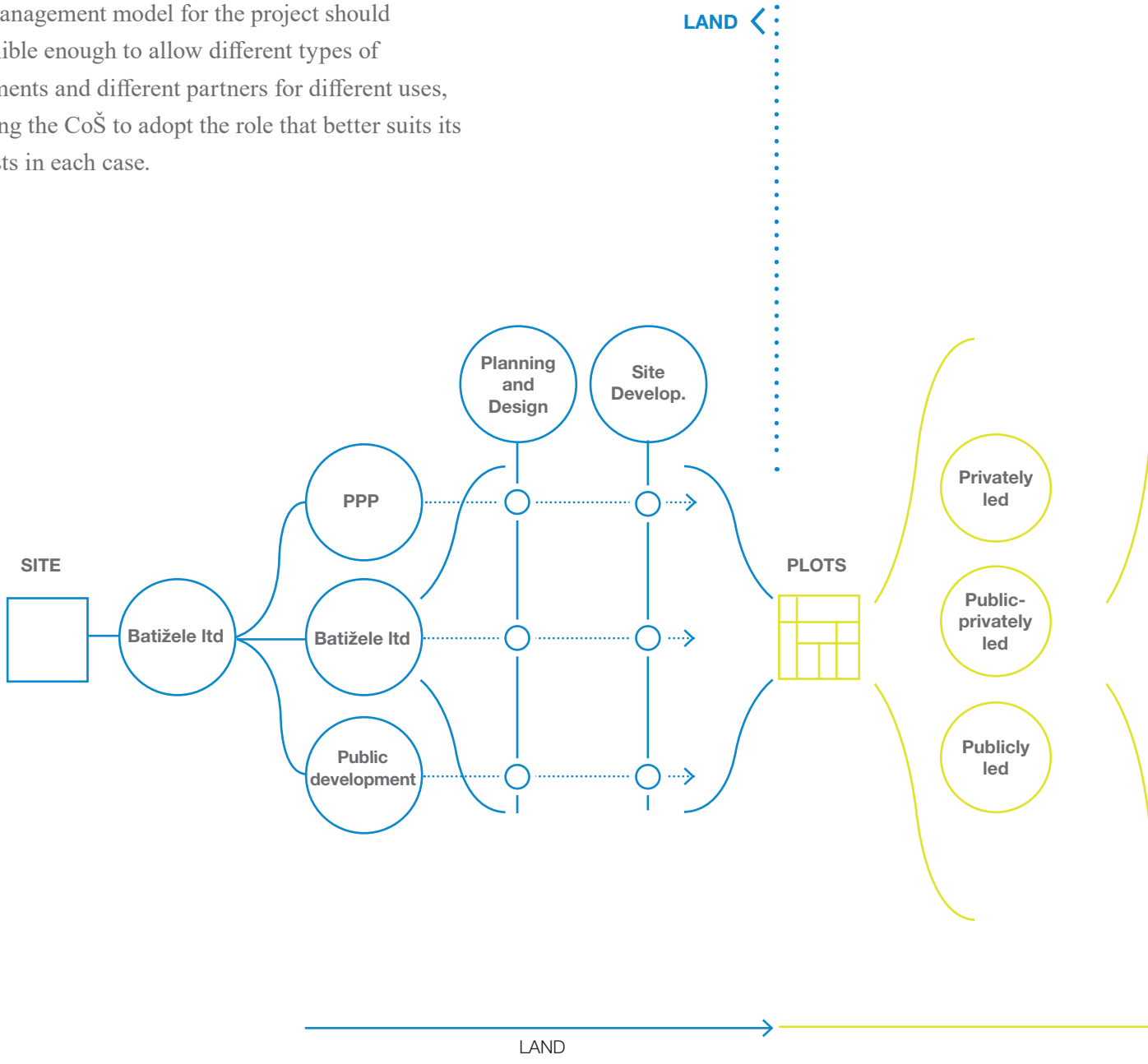


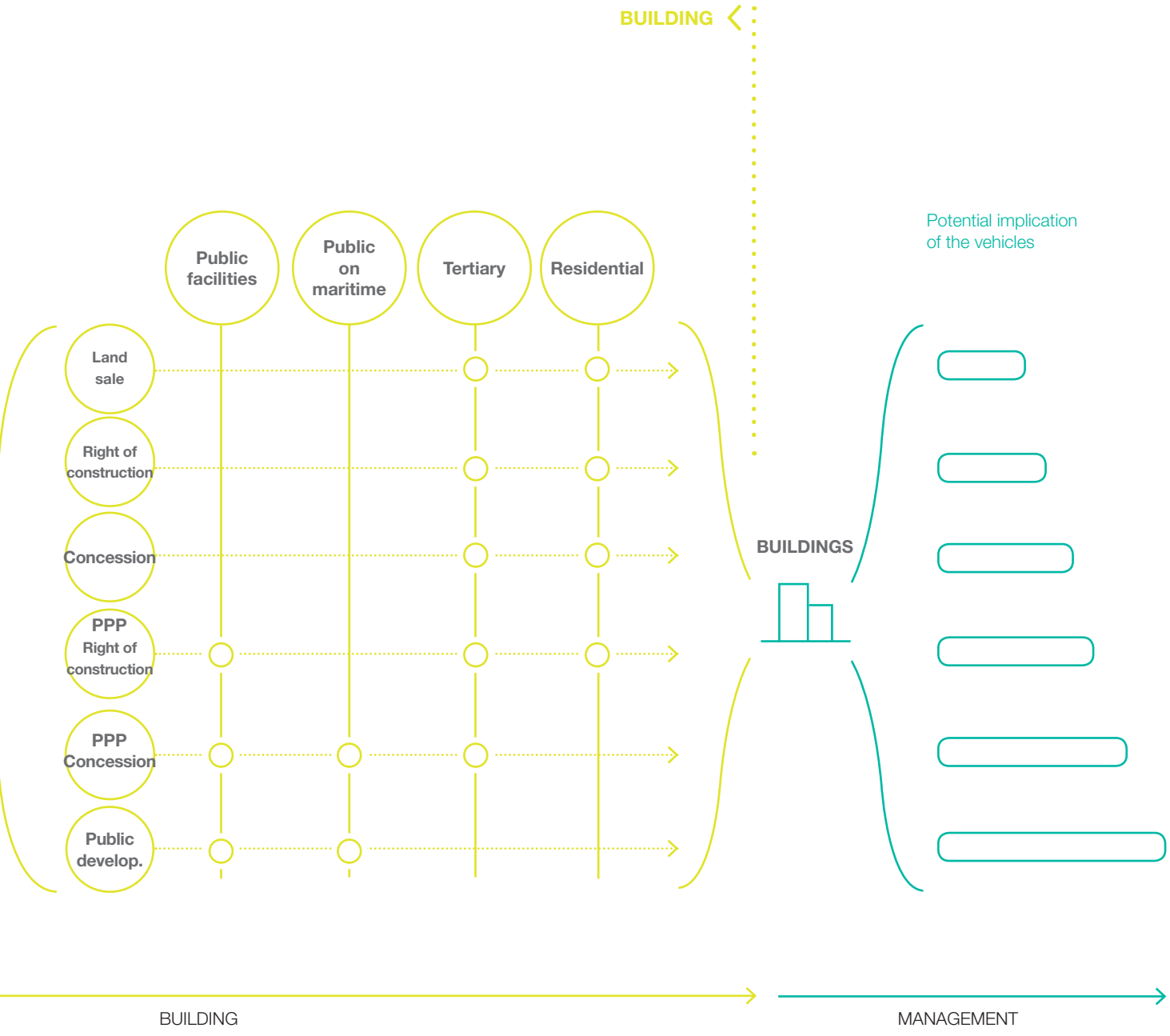
ALTERNATIVE PHASING B



Project Management Models

The management model for the project should be flexible enough to allow different types of agreements and different partners for different uses, allowing the CoŠ to adopt the role that better suits its interests in each case.




BUILDING
Public facilities
Public on maritime
Tertiary
Residential
Potential implication of the vehicles
Land sale
Right of construction
Concession
PPP Right of construction
PPP Concession
Public develop.
BUILDINGS
BUILDING
MANAGEMENT

In outlining possible models for development of the Batižele Area, or parts of the Area, we must first differentiate between the legal models for disposition of real estate, from the strictly and non-strictly regulated PPP models between public and private partner (strictly regulated hereinafter referred to as PPP), which also include some similar legal models, but they also regulate broader issues, and will therefore be explained separately.

The town of Šibenik can proceed with the development of the Area in a number of ways: on its own, in cooperation with private partners in unregulated PPP models for commercial purposes (unregulated as in terms of the Croatian Act on Public Private Partnership), it can release parts of the Area for development to private partners in accordance with their plans, or apply for some of the regulated PPP models in accordance with the Croatian Act on public private partnership (hereinafter referred to as PPP Act).

Before going into greater details, it is important to know that according to provisions of article 391. of the Croatian Act on Ownership and Other Real Rights (the main act governing property title in Croatia), the authorities governing the local self-government units (municipalities) may alienate or dispose with real estate in their ownership, only in tendering procedures, which are subject to the payment of consideration established on the market value of the real estate.

LEGAL MODELS OF DISPOSING WITH REAL ESTATE

We have outlined three possible models of putting the real estate owned by the town of Šibenik into operation and development, and they are as follows.

Sale and purchase of individual land plots

The simplest model for opening the doors to possible investors, would be to sell some of the plots to third parties, which would then develop the real estate according to their business plans and agendas. The upside of this approach would be that it fills the town budget for other projects while being the simplest as it does not require further effort from the town of Šibenik, because all further construction and development would be in the hands of private capital. The downside of this approach is that the town of Šibenik loses control over the development of these plots, and the only way for it to influence or determine the possibilities of development would be through urbanistic planning: Spatial plan of development for the city, General urbanistic plan and especially the Urbanistic plan of development for the Area, being the most detailed plan, and the only one that has still not been enacted. Of course, these possibilities are limited in nature, as the possibilities of determining construction in this way are limited.

Land leasing in a concession

A concession is a grant of rights, land or property by a government, or local authority, acquired by an agreement, and limited in time. The Croatian Concession Act recognizes three types of concessions:

- Concession for the economic use of a common or other good
- Concession for certain types of works
- Concession for services

All of the concessions are made in the form of an administrative agreement which regulates provisions on mutual rights and obligations related to a given concession. A concession covering several types and/or objects of a concession, which cannot be objectively separated, shall be granted in accordance with the provisions of the award procedure applicable to the main object of the concession.

The Croatian Concession Act deals with the concession process in great detail, so we will only single out the most important provisions in order to understand concessions in the manner presented in the Act.

Article 7. of the Croatian Concession Act prescribes that municipal units are authorized to give concessions, while the value threshold relevant for determining the application of the concession rules from the Croatian concession Act is published in the Official Journal of the European Union and on the websites of the Ministry of Finance. Currently that threshold is set at 5.548.000,00 Euros or 41.695.439,00 HRK, so that is the limit over which the rules from the Croatian Concession Act must apply when granting a concession.

Competent administrative body of the municipality is authorized to conduct all preparatory actions for the granting of concession, except the granting itself. Article 8. of the Concession Act states that concessions can be granted in a number of areas, especially: for the exploitation of mineral resources, water use, on maritime domain, for the operation

of liner and coastal maritime and inland waterway transport, for the provision of public transport services, in the field of sports, for utilities, for waste management activities, in the field of tourism, in the field of health, and others.

The concession feasibility study is a prerequisite and needs to be made by the concession grantor. In the case of concessions for services and concessions for the economic use of a general or other good with an estimated value of less than HRK 15,000,000.00, excluding value added tax, the concession grantor may, instead of a concession feasibility study, make an analysis of concession granting.

If concessions and public procurement are to be the subject of the contract, the public procurement rules shall apply to the procedure.

The concession grantor shall, in the tender documents and in the notice of intent to grant a concession, state conditions of the tender guarantee that the bidders must submit. The decision to grant a concession, after the expert concession commission reviews and evaluates the tender, is made by the concession grantor. The decision to grant a concession is an administrative act.

The concessionaire shall pay the concession fee in the amount and in the manner stipulated by the concession contract in accordance with the provisions of the law. A lien may, with the consent of the concession grantor, be established on the concession in favour of financial institutions in order to secure the claims of those institutions.

Concession on maritime domains can be established for periods from min. 5 and max. 99 years.

Establishing the right of construction on individual land plots

The right of construction is a real property right on someone's land, that authorizes their holder to have their own building on the surface of that land or below it, which the everyday owner of that land is bound to endure. The right of construction is also a real property (real estate) in the legal sense, as the building belongs to it as if it were a land plot.

The right of construction is established by double entry of the right in the land register, firstly by its entry as a burden on the land being encumbered, and secondly by its entry as a particular land registry unit in a newly-established land registry file. The right of construction can be mortgaged, burdened and even inherited; therefore, the right of construction is suitable for procuring a loan secured by mortgage. The right of construction in Croatia is not limited in time by law, but nonetheless it can be limited by the legal agreement in regard to its duration or other different conditions. If the duration of the right of construction is inscribed in the land registry it than has an erga omnes effect, as no one can claim that he was not aware of this fact.

The holder of the right of construction is required to pay a monthly fee to the owner of the land plot on which the right of construction is established on, but after the termination of the right of construction the owner of the land plot is required to reimburse the (former) holder of the right of construction, in the value of the building in real estate transactions which has augmented the value of his real estate. If the value of the land plot with the building was, for example 1500, and the value of the land plot would be 1000 without the building, the owner of the land is required to reimburse the holder of the right of construction in the value of 500.

The right of construction terminates by destruction of the building concerned, by waiver of the beneficiary, by expiration of the term and by fulfilment of the termination clause, by the protection of the trust of third parties, by dissolution of the beneficiary, by relief and by revocation. Upon the termination of the right of construction, what was legally separated from the land becomes a component part of such land.

The building constructed on the right of construction can also be converted to a condominium, and after the termination of the right of construction the same rules as above apply to condominium tenants. Their right of ownership ceases to exist, while the owner of the land plot is required to reimburse them for the increased value of his plot, or of course draft a new agreement.

These are only the most basic information about the right of construction, but based on the described characteristics it could be assumed that the right of construction can be suitable for the development of some parts of the Batižele Area. The upside for the town of Šibenik would definitely be the fact that there would be no initial investments required on its part, while the right of construction would provide a steady

income of funds on a monthly basis. We suppose that the town would have its interest in agreeing a maximum duration of the right of construction while also inscribing it in the land registry, and in that way it would keep control of the land plots in question, as they would, at one point further in time, return to the town of Šibenik ownership. At that moment the town could choose to prolong the agreement or decide on a new route to take in development of the Area. Therefore, the control it relinquishes is only temporary, while keeping options open for future development.

In practice, the right of construction in these kind of development models is often connected with a concession and therefore can be limited in time by provisions from a special Act.

Public development

The last option for development of the Area is Public development. It is safe to say that this option will probably not be viable for the development of the entire Area, as it would require substantial funds and would be an excessive burden on the town budget, but it could be explored as an option for development of some of the real estate, e.g Multigenerational facility, or other facilities with intended public uses. It would allow the town of Šibenik to keep absolute control over some of the areas and facilities which it deems important in terms of public needs.

PUBLIC PRIVATE PARTNERSHIP MODELS OF DEVELOPMENT

PPP in general terms

There is no singular definition of what public-private partnership actually is, but in general terms it represents a long term, regulated collaboration between public bodies and the private sector, where they merge to jointly organize an endeavor which is mutually beneficial, and by which the risks for such activities are optimally relocated.

When describing public private partnership in general terms, it is important to understand that we are actually talking about models of cooperation between the public and the private partner, and not PPP in Croatian legal terms according to the PPP Act.

It is a long-term project relationship that involves various forms of cooperation between public and private partners. The private partner produces the project documentation or retrieves it from the public body if it has already been created, builds, finances, maintains and manages the construction in exchange for a fee directly from the service user or the public body.

The two most basic model of cooperation are the contractual PPP model in which the mutual relationships between the public body and the private partners are regulated through one and/or series of agreements, and the SPV model, based on joint membership between the public body and private partner in a SPV company.

The private partner is partly involved in financing of the project, and the rest of the value is reimbursed by the public body from its budget. Such a financial construction is often governed by complicated contractual relations involving public and private bodies. The relatively long duration of the relationship, enables the return of the investment to the private partner, and such long-term relationships require open and transparent mutual cooperation between the public and private sectors on the basis of contractual obligations.

There is a division of risk between the public and the private partner, basically the transfer of part of the risk to the private partner. However, this does not mean that the private partner fully bears the risk of the project, the risk sharing is assessed on a case-by-case basis and depends on the ability of the project participants to assess, control and manage the risk.

It is estimated that currently in the EU 15% of all financing in the public infrastructure is done through public-private partnerships.

PPP in Croatia

According to the Croatian act on Public Private Partnership, PPP is a long-term contractual relationship between a public and a private partner, for the **construction and/or reconstruction and maintenance of a public building, for the purpose of providing public services** within the scope of the public body's competence, while a PPP project is a project approved or registered by the Ministry of economy.

From these definitions we can see the difference between the general definition of PPP, and the definition according to the PPP Act, which differentiates PPP projects between those which have a commercial purpose, and those that are

providing public services/constructing public buildings. The projects which plan to construct public buildings and provide public services are deemed PPP projects who can be subjects to the Croatian Act on PPP, while the others cannot. It is not possible to apply the PPP model if the purpose of the project is not related to the provision of the public service, or if it is purely commercial in nature.

Of course, some projects can be of mixed purpose, both commercial and public purposes, and these kinds of projects can also apply to become PPP projects, if they are deemed to have a sufficient standard of public interest and/or services.

The PPP contract is concluded in writing and for a fixed period, which may not be shorter than three or longer than forty years, unless a longer period is stipulated by special law. The deadline is an important element of the project. The length of time is already determined in the public sector cost comparator, in a way to achieve the best value for money for the public body. The contract will also specify what is the anticipated term of construction (e.g. 2 years), what is the period of utilization of the building (e.g. 25 years), or what is the moment (date) of the start of service provision (e.g. in the project of construction that term indicates the moment when the public authority takes over the maintenance of the facility and is responsible for the availability of the building). Setting these deadlines is extremely important because the private partner is responsible for complying with the construction deadline and will bear all the costs that would be due to exceeding these deadlines. Furthermore, only after it has completed the construction phase and started to provide the contracted service, private partner can start collecting fees (either from the end users or from the public body), or other benefit from the investment. In PPP projects, the basic principle is that if there is no service, there is no payment.

The PPP subject may not be solely the delivery of goods, nor solely a concession for the economic use of a common good or other good, while the basic principles in preparation and implementation of PPP projects are the principles of public procurement, public interest protection and the principle of economy.

The basic rights and obligations of the public body are to set the standard of services, to pay and/or collect fees, and to monitor the services delivered. The basic rights and obligations of the private partner are the management of the assumed risks related to the financing and construction process, the risk of the availability of public buildings and/or the risk of demand, and the collection and/or payment of fees.

The public body is the only one authorized to propose the PPP project, which is submitted for approval to the ministry of economy, and the selection of a private partner is carried out in accordance with regulations in the field of public procurement. **The criteria for selecting the best offer in the procurement procedure is solely the most economically advantageous tender**.

The Ministry of Economy establishes and maintains a Register of PPP Agreements. If a PPP project is approved by the Ministry, then the doors are open for financing such a project, either from the Republic of Croatia or the European union funds.

Differentiation of the PPP models in Croatia

The Croatian PPP differentiates between two different PPP models according to methods of linking the public authorities and private partners:

- Contractual PPP model in which the mutual relationship between a public body and a special purpose company is governed by a PPP contract (Joint-venture model)
- Company PPP model based on the membership relationship between a public body and a private partner in a SPV company, which is responsible for implementing the PPP project (SPV model)

The PPP projects can also be distinguished according to the source of income for the private partner, as:

- Projects in which the public body pays compensation to the private partner, for which the right of construction is usually established in favour of the private partner (the so-called PFI model)
- Projects in which end users pay direct compensation to the private partner (the so-called Concession model)

PFI model

This PPP model implies that the public body establishes the right of construction (the most common legal institute in PFI models, but not the only one) for the benefit of the private partner, after which the private partner, as the holder of the right of construction, builds a public facility (public building),

owns it, and maintains it throughout the duration of the PPP contract, according to the specifications of the public body and the terms of the contract.

After the construction of the facility, the private partner leases it to the public body who uses the facility for its needs (provision of public services) and in return pays compensation in cash to the private partner, for the obligations the private partner has undertaken. This model is mainly applicable to social projects such as schools, hospitals, public administration buildings, prisons, kindergartens, etc. These are projects in which the private partner does not usually undertake the obligation to manage the delivery of the public service and in which the end users do not pay a fee for services.

For projects that can be characterized as rights of construction based, the public body pays a fee to the private partner from the budget for the availability of the building, and charges a fee to the private partner for the construction right. **The difference between the right of construction model described before, is that this fee (if any) will usually be of a symbolic nature (e.g. HRK 1 per month/year)**. Therefore, in the PFI model the payment relationship usually is completely inverted in relation to the classical rights of construction based ones, where the public body actually pays the private partner, while the fee that is paid by the private partner to the public body for the establishment of right of construction is only symbolic, and in reality, close to zero.

Concession model

It is important to state, that although this model is called the Concession model, a concession, as defined by Croatian laws, does not need to be the basis of the agreement, it can be a lease, right of construction, or some other legal institute.

Contrary to the PFI model mentioned above, in concession-based projects, the private partner, in addition to the risks of construction, financing and maintenance, also takes the risk of demand for the service. In such projects, the private partner's initial investment is returned through fees paid directly to the private partner (SPV) by the end-users for the use of the infrastructure or for the services provided. The amount of these fees, the terms and the mechanism for collecting the fees are clearly defined in the contract.

As a general rule the private partner pays to the public body an appropriate concession fee which can be divided into a fixed or variable part. On the other hand, in case the fees paid by the final beneficiaries are not sufficient to cover the overall cost of the project, part of the total revenue can be provided by the payment of the public body.

Therefore, the answer to the question of who will be paying whom depends on a large number of indicators that are defined in the necessary studies in preparation of the project. In some cases, depending on the estimated cost-effectiveness, it is possible for the public authority to assume some of the demand risk and to pay a certain amount of money to the private partner (in the manner defined by the contract).

With this kind of PPP projects (e.g. construction of a public garage, airport or highway), based on a concession or right of construction, the private partner is generally entitled to fully exploit the constructed building, and assumes the risk of demand. The private partner provides public services (such as accommodation of idle traffic, air, rail or road public transport) but also commercial services (such as renting premises for business and catering purposes).

Example of a PPP model in Croatia

The construction of a new gymnasium in Koprivnica was one of the most important priorities of the town of Koprivnica in the early 2000s, given the narrowness of the former building and the failure to meet pedagogical standards.

In 2006, a contract for 25 years was concluded between the town of Koprivnica and the county of Koprivnica-Križevci as public bodies and the company Tehnika SPV ltd as a private partner. By the PPP contract, the City of Koprivnica ceded the right of construction on the land it owned to Tehnika SPV ltd. for a period of 25 years, and then rented part of the sports hall and related facilities (paid 38.5% of the total rent), while the Koprivnica-Križevci County leased school and related premises (paid 61.5% of the total rent). Public procurement procedure was used for selecting the private partner and, on the basis of the analysis and adjustment of the tender, according to the lowest price criterion, the final tender of the most favourable bidder (Tehnika dd Zagreb) was selected and then established an SPV for the sole purpose of realization of the project (Tehnika SPV ltd). The contract obliges the private partner to take over and bear the risk of construction of the building, the risk of availability and the risk of variation in demand for the part intended for commercialization. After 25 years the facility becomes the property of the contracting

authority (public sector). According to official data, the cost of construction and furnishing (HRK 74.861.322,00) is cheaper compared to other halls built according to the traditional model.

Thanks to good cooperation between the public and private sectors, school for 900 students and a city sports hall for 2000 spectators were built within one year. Within a very short period of time, an urgent public need was realized, which in any other available way (own revenues, state budget, borrowing) could not be implemented. In the new gymnasium, classes are provided in standard and specialized classrooms, and outdoor spaces are provided for physical and health education, a school square and a parking lot.

A sports hall equipped with related facilities (changing rooms, showers, toilets, props storage, teacher's office, infirmary, office, entrance for external users, etc.) in addition to the needs of education, serves the needs of city clubs. The size of the hall satisfies the conditions for playing handball matches, and there is a theatre inside the hall.

Given the defined contract between the public and the private partners, the implementation of the PPP model also enabled the third objective to be achieved. Specifically, the risk of poor quality construction or use of poor quality material is the risk of a private partner. Therefore, not only the construction, but also maintenance for 25 years is agreed with the established standard, which means the same quality of service for a period of 25 years. Because the private partner bears the risk of maintaining and securing the agreed standards, he is motivated to incorporate quality materials and equipment, and thus there is no need to engage a public body to control the quality of construction, installed materials and equipment. Availability risk is also on the private partner which also leads to lower maintenance costs. An additional benefit of the contract is that only the services actually delivered are paid, which means that in the case of unavailable space or a lower standard of maintenance than the contracted standards, the rent will be reduced. Furthermore, there is no delay in construction since payments (rent) start with the use of the facility, so the private partner is maximally motivated to complete the works in a timely manner. The private partner optimizes the model as it not only generates revenue on a one-off basis but also through maintenance, which means long-term secured revenues, which is why the cost of construction itself is lower than the traditional model.
The gymnasium in Koprivnica was built twelve years ago, which is a sufficient period to estimate the success of the project, so this BFI model of a PPP partnership has proven to be beneficial for the municipality and the county, resulting in lower costs and higher quality as opposed to traditional models of development.

CONCLUSION

From all of the above, it is evident that the town of Šibenik has several options for development of the Batižele area, whether it decides to develop individual plots on its own or in cooperation with private partners.

Each of the models has its advantages and disadvantages, and it certainly will not be possible to apply the same models for the development of residential quarters, beach areas, halls or hotel complexes, so after determining exactly what facilities are to be built in the Batižele area, it is necessary to make a detailed analysis and/or feasibility studies for each individual project, to determine the risks, cost-effectiveness and compliance with the long-term vision of the city's development in order to achieve the highest level of realization of the town and public needs.

PPP projects have in many cases, both in the European Union and in Croatia, proven to be a quality alternative to traditional construction models. The private partner can be involved in different stages of the project (design, construction, reconstruction and upgrading, implementation, financing) and plays an important role. The public body concentrates on defining an objective that is in the public interest, the quality of the service offered, and a pricing policy, and assumes responsibility for meeting those objectives.

Therefore they should definitely be kept in mind when constructing the plans for each area of development, be it PPP models as defined by the PPP Act, or informal models of cooperation between a public body and a private partner for the purpose of commercial exploitation of an object or area, which in their content and contractual structure are similar to PPP models from the PPP Act.

Benchmarking

BENCHMARKING

Case studies

In this section we develop a full benchmark analysis on three international urban regeneration case studies that have achieved successful transformations in their cities. The reference projects provided were briefly presented in the previous Stage A.

This benchmark provides an understanding of the most relevant issues and opportunities for Šibenik´s brownfield urban regeneration. It analyses their development proposals, how they have been implemented in terms of timing, development models and it highlights their success stories.

318,811 (2019)
Population of Nantes

100,435 (2018)
Population of Barakaldo, (Bilbao)

37,112 (2019)
Population of Šibenik

14,774 (2017)
Population of Tivat

The final selection includes Bilbao Ría 2000 Urban-Galindo, Île de Nantes and Porto Montenegro. The identification of the reference projects is based on the following main criteria:

- **Publicly owned land:** The power of the public administration over the future development of this site can be more strongly exercised if the land is publicly owned. Drivers for development are then balanced between real estate and public interest, allowing for longer development periods to maximize city benefits.
- **Publicly led projects:** They can become the catalysts of urban transformation in which public vision is materialized through exemplary spatial developments.
- **Public-private development model:** These are very interesting development models in which the private sector can contribute with resources, investment and knowledge to the benefit of public projects.
- **Change in the territorial model:** These projects have been selected because of the impact they had in repositioning their cities and the value created in them.

In those cases where a project is not matching all the above mentioned criteria, it has been chosen for its relevance to another parameter that might be of great importance for Šibenik´s regeneration project.


Île de Nantes
Nantes, France
Bilbao Ría 2000
Urban-Galindo
Bilbao, Spain
Porto Montenegro
Tivat, Montenegro

BENCHMARKING

Île de Nantes

Île de Nantes is an example of a long-term urban transformation in the productive sector with a shift towards the creative industries. It is led by Samoa, a local public company with a double competence: it is at the same time urban developer of the island of Nantes and economic developer in the field of cultural and creative industries.

The Île de Nantes is an island in the River Loire, at the core of the city. Originally the western end was home to the port and shipyards, but these activities moved further downriver to the mouth of the Loire, leaving behind an industrial brownfield site available for new and innovative sustainable and environmentally friendly uses.

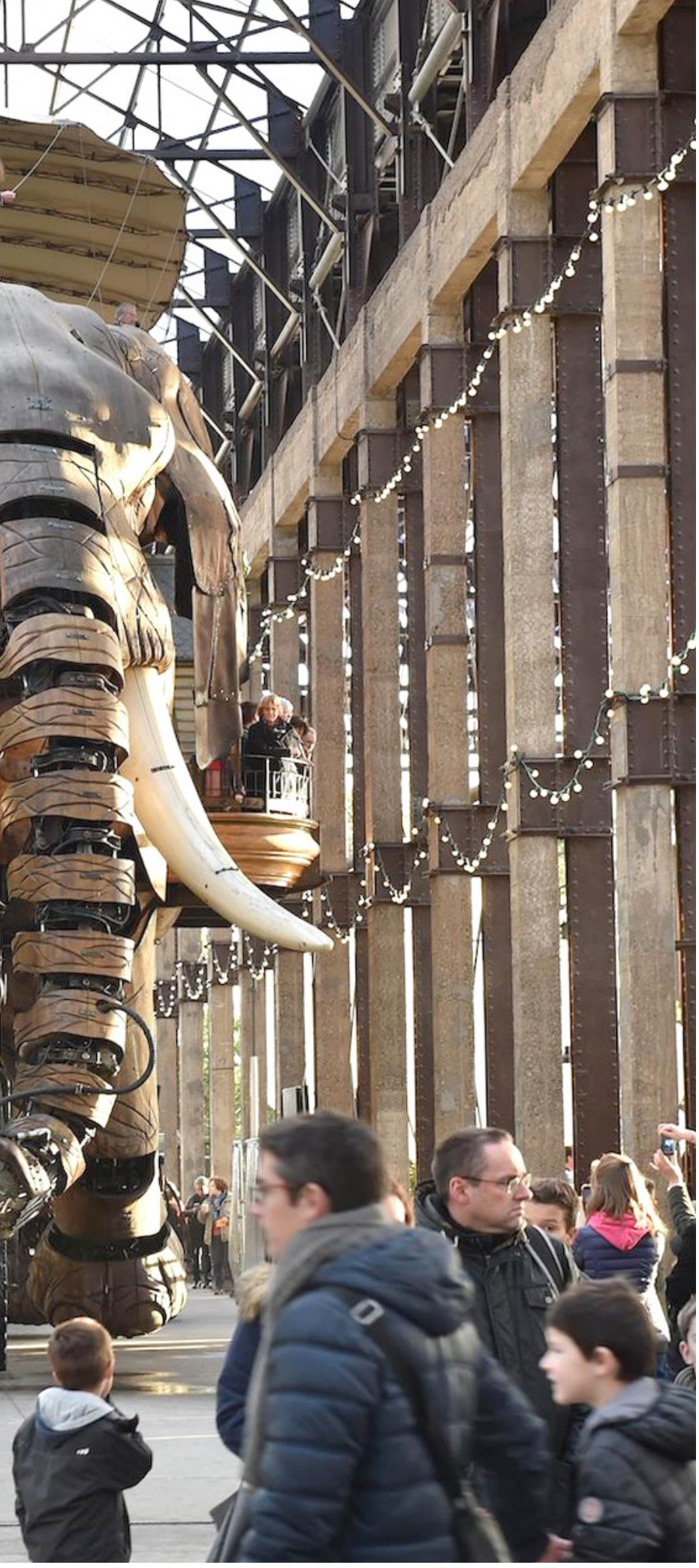
Culture is one of the elements transforming the island. Among the main attractions is Les Machines de l'île (Machines of the Isle), bringing to life the astonishing imaginary and mechanical creations of Jules Verne and Leonardo da Vinci. It is housed in the former shipyard warehouses and opened to the public in 2007.

ILE DE NANTES

Developer - Samoa

Location - Nantes, France

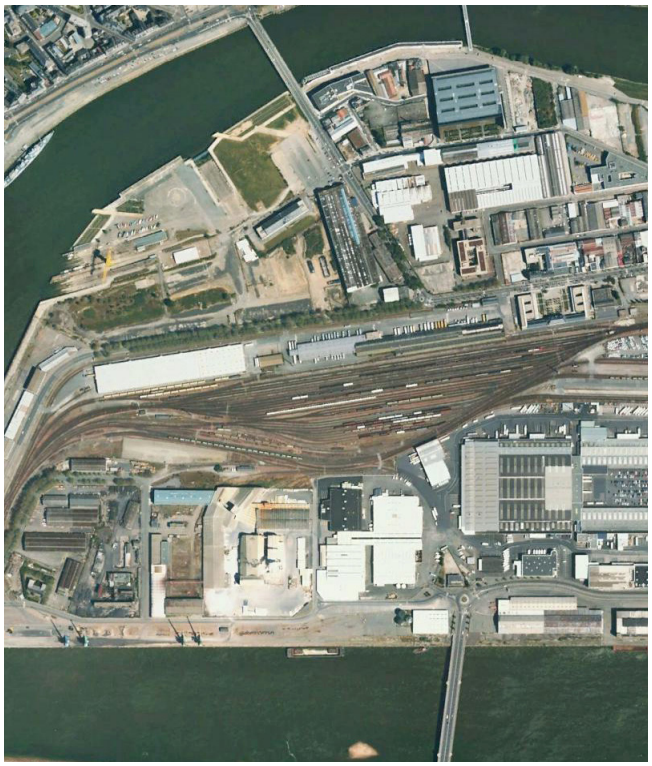
This project gave back to the Loire a central place in the city and renewed the network of public spaces.



The Grand Elephant is one of several robotic animals who roam at the Machines of L'Île, a project which opened in 2007 and occupies old shipyards. It has been significant in building Nantes's contemporary cultural image.

€ 17.7 million
Investment (Les Machines)

337 ha
Site area



2004 Aerial view

2018 Aerial view

CITY-WATERFRONT RELATIONSHIP

The Île de Nantes project has reinvented the city by stimulating creativity in a former industrial area, previously occupied by shipyards.

CONNECTIVITY

After the phase of deindustrialization, the island presented very poor connectivity with the city centre on the opposite bank of the River Loire. The regeneration project enabled a progressive implementation of travel alternatives to meet all users´ needs. The transformation of the different neighbourhoods acted as a lever to develop the public transport offer, including new public spaces and favouring soft modes for pedestrians and cyclists.

NATURAL ENVIRONMENT

One of the main drivers for Île de Nantes was to turn the island into a resilient and fertile development. A process of depollution and renaturation of soils was carried out, incorporating biodiversity and taking into account the water cycle. Linked to the idea of wellbeing, a strategy of introducing nature (including productive) and the Loire in the city was developed through a network of parks, urban farms and private gardens.

KNOWLEDGE AND CULTURE

From the beginning, the project relied on culture as a main pillar of the urban development, following the Guggenheim example in Bilbao. However, Île de Nantes did not choose a museum as its flagship feature in terms of creating an architectural and urban icon, but opted for a combination of several projects. When selecting “Les Machines de l’Île” (“The Machines of the Isle”), the city’s councillors supported a playful, artistic, cultural and touristic project.

The Machines of the Isle have developed an emblematic way of animating the public space by creating an urban scenography which attracts locals and tourists alike.

Education has also played a significant role in the development. Since the construction of the School of Architecture, one of the first programs of the urban project in the early 2000s, the number of facilities has grown significantly to meet the expectations of learners of all ages. A professional training establishment for dancers, a centre in digital training or even the catering with the Vatel hotel school are some of the successful examples.

MIXED-USES DEVELOPMENT

The Île de Nantes 337 ha development plan-guide is based on a survey completed in 2003. The document sets the most rigid urban planning elements focusing on building height regulations, which are calculated for each lot according to the mass of existing buildings. The development is structured around two core phases.

Phase I (2000-10)

This phase was designed to create a vision that would adapt and respond to future urban dynamics. The public spaces were reconfigured with a special focus on sustainability and social inclusion. Access roads, bridges and footpaths were recreated to reconnect to the city centre, and a new creative cluster was developed.

Phase II (2010-30)

The ongoing phase focuses on further developing the results of the previous one with a special emphasis on sustainability (both economic and environmental). Specific objectives of phase II are to develop projects for the new creative and eco-districts, build new transport networks linked to sustainable mobility, and redevelop railway land to create bike paths and parks.

Land use

- 1.5 million sqm net floor area
- > 700,000 sqm of apartments (25% social housing, 25% affordable homes)
- > 450,000 sqm of economic activities (offices and retail)
- > 350,000 sqm of community facilities (including 270,000 sqm for the university hospital)
- 150 ha of public space

Development areas

- The Creative Quartier: 15 ha of culture and creativity
- The Prairie-Au-Duc District: 15 ha as a laboratory for urban, environmental and social innovation
- The South-West of the Island: 90 ha
- The Loire River Park

Since 2011, Samoa, the public agency, has been in regular contact with project developers and operators with a view to fostering new development initiatives and turning Prairie-Au-Duc District into a pilot neighbourhood: shared premises and services, flexible housing, shared living spaces, intergenerational coliving, pooled parking etc.

GOVERNANCE AND IMPLEMENTATION

Land ownership

The land is owned, managed and developed by Samoa.

Project leadership

The regeneration project is publicly led by the metropolitan area and the city of Nantes. Samoa is the public agency in charge of Île de Nantes's redevelopment. It was created in 2003 by Nantes Métropole. Samoa defines the global development strategy of the island of Nantes in relation with public policies, provides public space contracting and the monitoring of real estate operations carried out by private and public operators. Furthermore, Samoa sells building rights to real estate developers with specifications on architectural, energy and social requirements (minimum social or affordable housing). Not being able to control all the land of the development operation, it also accompanies developers carrying a project on their land.

In 2009, Samoa became an SPL (Local Public Company) which brings together public shareholders, the two main ones being Nantes Métropole and the City of Nantes. Since 2011, Samoa has been contributing to the development of cultural and creative industries in metropolitan France, as part of a public service delegation. It relies on the skills of a team in the Creative Factory, an integrated agency that animates and networks the creative sectors of the territory. Samoa has also aided enterprises in finding office space and advising prospective start-ups, brokered collaboration across businesses and developed incubator spaces.

Management

The regeneration scheme follows an evolving plan which is updated on a three-monthly cycle, meaning that projects become part of the planning framework as they are completed, while specific intervention points on the island are highlighted to ensure the development's overall coherence.

Stakeholders

Innovative placemaking strategies include consultation with urban stakeholders such as universities and businesses, supported by international networks through Europe (e.g.Eurocities).

Community engagement

Dialogue between government and community has been a key feature of the project. A workshop program ran between November 2011 and January 2012 involving 12,000 residents across the Nantes urban area to make recommendations for the construction of the island until 2030.

TIMELINE

1987

Closure of shipbuilding industrial activities

2000

"Plan guide" for a sustainable city

2003

Creation of SAMOA

2005

Conquer public space

2007

Opening of Les Machines de l'île

2009

Eco-city

2013

Development of a metacentre Nantes European Green Capital

2014

Bicycle path landscaping

2017-2019

Opening of L'École des Beaux-Arts and Les Halles

2020-2026

Construction of future CHU Hospital

INVESTMENT

The Île de Nantes project as a whole includes a mix of private investment and public funding (through Samoa and various local and federal authorities). Samoa´s capital is 1 million euros and in the year 2018 its turnover was of 18,904,000 euros. There is scarce information about the whole Île de Nantes financing scheme.

The Creative Quartier has an estimated 180 million euros investment. The financing of the construction of the Machines de l'île, 17.7 million euros, has enabled this tourist and cultural attraction become a key player in the dynamic urban renewal project of the Île de Nantes.

As a developer, Samoa invested 600,000 euros to transform the industrial Karting into a start-up village. Being the economic development agency, Samoa has benefited from a great incubator for at least 10 years for free. The low rent paid by the start-ups during 10 years will balance the investment initially made for its development.

Investment strategy

- European funding: Co-financing of projects for brownfield regeneration (REVIT), and for urban planning and sustainable construction (CONCERTO).
- National funding: The State finances some facilities, which are integrated in the development.
- Regional funding: It participates with 20% in Samoa and promotes specific real estate projects in the area.
- City funding: Participates with 17% in Samoa, financing local facilities and mobility projects. As part of Nantes Métropole, it is Samoa's majority shareholder: 58%.
- Private companies: 26 private developers, mostly local and regional, developed in 2011 57 of the 84 developments.
- Social companies: Some property developments by associations (autistic, elderly, ...) with social purposes.

REAL ESTATE COMMERCIALIZATION

Special attention has been devoted to achieving the right balance between homes, offices and local shops, backed up by a strong commitment to social diversity. Nantes' urban developers understand the importance of cultural facilities, the creation of pop-up spaces to welcome young businesses and activities in favourable conditions.

KEY SUCCESS FACTORS

Île de Nantes has been developed through a "plan-guide", a highly adaptable, light planning tool that differs from a conventional master plan. The plan-guide seeks to involve the community and presents broad design principles that are capable of evolving as new needs emerge.

Mainstreaming culture across other development policies (urbanism, tourism, and ecology) has also contributed greatly to the project's success. A key challenge for Nantes throughout the implementation of the project is to make sure the creative vibe does not die out, so gentrification processes need to be closely monitored.

The Machines, spread across the island, have enabled certain sites to be enhanced, and more generally have resonated with the proposed development project for the whole island.

What sets the Nantes projects apart is that they combine the protection and enhancement of the area's port and industrial heritage with contemporary cultural offerings. Moreover, they have gained the unanimous approval of local stakeholders. The city's urban marketing is based on the promotion of an event-driven cultural policy with annual festivals and innovative events.

As in other cities, investing in symbolic policies that yield rapid results at relatively low cost has appeared to be a winning strategy.

BENCHMARKING

Porto Montenegro

Porto Montenegro is as example of high class development anchored on the values of excellence and the character of the Adriatic region. Located on the shore of the UNESCO protected Boka Bay, it is more of a city in itself.

The genesis of this project came when Porto Montenegro's primary investors identified an extraordinary opportunity: an overwhelming demand for yacht berths around the Mediterranean. With this, they sought to create a world-class marina that would satisfy the growing shortage of berths, while allowing outside investors to share in the long-term capital appreciation that waterfront property and berths have enjoyed over the past 50 years.

The project consists on 12 separate structures of high end residential accommodation, approximately 115,000 sqm in area. It also includes a first state of the art marina in the Adriatic and a boutique 5-star hotel. The overall development size comprises over 300,000 sqm of accommodation.
The buildings have been designed to reflect the local vernacular architecture, with masonry cladding and pitched clay tile roofs. They relate closely to the jetties and quay walls of the proposed marina.

PORTO MONTENEGRO
Developer - Adriatic Marinas d.o.o.
Location -Tivat, Montenegro
Focused on creating a state-of-the-art destination, designed and built according to the highest quality standards.

The Porto Montenegro Marina is capable of accommodating up to 600 yachts, including some of the largest super-yachts in the world. It received the prestigious award ‘Marina of Distinction’ for 2017 and is ranked among the best marinas of the world.

€ 551 million
Investment (2007-2018)

168 ha
Site area

2006 Aerial view

2019 Aerial view

CITY-WATERFRONT RELATIONSHIP

Porto Montenegro lies on a former military submarine and ship base of Yugoslavia, which has been turned into the most luxury marina in Montenegro. This has become the first comprehensive state-of-the-art deep-water marina in the Adriatic Sea. The project, located on the shore of the Boka Bay, has created a city in itself.

CONNECTIVITY

The development follows a marina-centred approach with a main promenade. The design is respectful of location and architectural inheritance but is also entirely new; it contains familiar spatial relationships that help visitors to navigate their way through the town and it holds intentional surprises to intensify the experience of discovery.

NATURAL ENVIRONMENT

The project includes large parks which act as a buffer zone towards the city of Tivat and enable hosting outdoor activities and sports.

KNOWLEDGE AND CULTURE

Porto Montenegro opened the Naval Heritage Collection in summer 2011 to maintain the legacy of the former arsenal's prestigious naval history. Artefacts from the ex-Yugoslav naval base are displayed across two levels of a restored Austro-Hungarian sawmill.

It also counts with a 560-seat auditorium which has staged large-scale conferences, presentations, concerts, dance recitals, theatre performances and movie projections.

More recently, it counts with the Innovation Centre, a coworking office designed to support Montenegro's growing entrepreneurial, start-up and freelancer sectors. It combines both indoor and outdoor work spaces in a facility that has been created for a new generation of tech-savvy, location independent workers, offering flexible memberships.

MIXED-USES DEVELOPMENT

Land use

The Porto Montenegro development will include 95,000 sqm of residential space along the waterfront and a 650-berth marina when complete. Porto Montenegro´s residential offer includes townhouses, apartments, penthouses and duplexes housed in individually-designed buildings, each no greater than five stories high. The diversified offering is designed to appeal to a wide range of purchasers from boat owners, crew, locals to foreign home buyers.

Shops, restaurants, cafés and The Porto Montenegro Yacht Club are scattered at certain intervals along the quayside in a progression designed to flow from the intimacy of the residential zone to the vibrant jet-setting marina.

Development phasing

The first phase is divided into two segments and focuses on the development of surrounding luxury residences and restaurants.

The first segment includes 183-berths, of which 89 are for mega-yachts. Of the total 650, about 150 berths (25%) will be for superyachts and will accommodate an up to 150m-long yacht.

The development has support facilities such as on-site customs and immigration, provisioning, duty-free fuel, 24-hour security and wastewater disposal. The facilities include squash and tennis courts, bowling alley, gym, the Porto Montenegro Yacht Club and an internet café.

The most recent phases will include casino, cinema, additional residences and luxury hotels. The waterfront community development also includes a large public lido, conference centre, 250 condo units, sports complex, a market square, a nautical museum, an art gallery and 10,000 sqm of retail space.

GOVERNANCE AND IMPLEMENTATION

Land ownership

In 2007 the private investors paid $26 million for a 99-year lease on a rundown, government-owned naval site.

Project leadership

The largest private-sector investment in the country has been developed by the company Adriatic Marinas DOO. A 54% stake of the company is owned by Canadian businessman Peter Munk. Other investors include Lord Jacob Rothschild, Sandro Demijan, Oliver Corlette, Oleg Deripaska, Anthony Munk, Bernard Arnault (LVMH Chairman) and Nathaniel Rothschild.

In 2016 Porto Montenegro was acquired by the Investment Corporation of Dubai (ICD), the principal investment arm of the Government of Dubai with investments spanning financial services, transportation, energy and industries, real estate and leisure and retail.

Management

Adriatic Marinas manages the marina village, providing first-class services to yachts, residents, retail tenants and their guests. A service charge to cover these costs is based on the areas occupied in proportion to the total area and is levied on the residents (commercial and residential). Outside of the service provision, a sinking fund has also been established for any future repairs. The service charge is between €45 and € 85 / sqm / year for property owners and is subject to adjustments based on the actual cost.

Stakeholders

The World Bank and the European Bank for Reconstruction and Development (EBRD) are investing in the upgrade of the local water, sewage, transport and electricity systems.

Community engagement

Porto Montenegro has invested over 3.5 million euros from the beginning of the project, through donations and sponsorships to numerous sports, educational and cultural institutions which support and benefit the local community.

TIMELINE

2007

Site purchased and international master plan competition

2008

Construction started

2009

Opening of 85 berths, waterfront residences, facilities and retail

2010

Opening of first segment of first phase

2012

Second phase completed

2014

Regent Porto Montenegro 5*Hotel and Residences opening

2015

Awarded Superyacht Marina of Year

First 6 residential buildings sold out

2016

Development acquired by Investment Corporation of Dubai

2019

"Elena" residential building inaugurated

INVESTMENT

The Porto Montenegro marina and resort development has cost 551 million euros so far.

Investment strategy

Adriatic opportunities Ltd have one of the largest real estate investment portfolios in Montenegro. AOL is in a prime position to be a major beneficiary of the luxury tourism, having acquired and consolidated a significant coastal portfolio of zoned development land projects (with a focus on luxury villas and boutique hotels). This provides a legally assured platform on which real estate developers can enter the Montenegrin market with confidence to build out finished saleable product (villas, integrated communities, resorts and hotels). AOL's strategies consist of a combination of individual assets to private buyers and packaged sales to investor developers and/or Joint-Venture development options.

In May 2016, the Investment Corporation of Dubai (ICD) purchased the Porto Montenegro resort for an estimated $200 million and it intends an investment of 500 million euros ($555.4 million) in the next 15 years.

REAL ESTATE COMMERCIALIZATION

Many of the apartments have been sold off-plan. Focused on providing a year-round luxury living, the Porto Montenegro village is a relaxation haven to accommodate the luxury lifestyles of homeowners and residents.

Regent Pool Club Residences follow the Hotel Condominium Model, allowing residents private access to the services and amenities of the 5* Regent Porto Montenegro Hotel as well as the Porto Montenegro Owners' Club.

A property rental service is available ensuring a secure and protected home whilst providing a regular income.

To stimulate the creation of a thriving marina community, Porto Montenegro is aiming to attract boats and residents simultaneously. Residential units are purchased with berths, and vice versa, with berths being discounted at 75% over a three, ten or fifteen year period when bought with a property.

KEY SUCCESS FACTORS

The whole concept of "community" is something that Porto Montenegro places significant emphasis on.

Porto Montenegro has more than 3,000 sqm of retail space. The aim is not the traditional luxury audience and brands, but to offer something different and niche and this model is working well.

The entire village has an organic, natural quality, avoiding the uniformity of most modern developments. It replicates the style of a typical Montenegrin village, with waterfront promenades and winding streets. Elements of the vernacular architecture combine with the Mediterranean features that resembles to the Venetian and Ottoman styling of local architecture.

Consequently, the design is respectful of location and architectural inheritance but is also entirely new; it contains familiar spatial relationships that help visitors navigate their through the town and it holds intentional surprises to intensify the experience of discovery. Even before the first phase opened in 2010, Porto Montenegro was being claimed as "the new port of cool".

REFERENCE PROJECT

Bilbao Ría 2000 Urban-Galindo

Bilbao Ría 2000 Urban-Galindo is a relevant project led by a publicly owned urban regeneration company. It is a role model for public-public collaboration, and for developing a long-term vision. The key lessons learnt from the process are the importance of placemaking and proud making, along with transparency throughout the whole process.

The mission of this urban transformation was to recover degraded and industrial areas within metropolitan Bilbao, contributing to shift to a balanced development and to improve urban cohesion. The spaces formerly occupied by shipyards, containers or blast furnaces, have turned into promenades, parks, outdoor art galleries, new neighbourhoods and business areas where quality architecture is presented as one of the key factors of this renewal.

To achieve this goal, Bilbao Ría 2000 was responsible for coordinating and executing actions that integrate urban planning, transportation and sustainability. These projects were developed with a global approach, while complying with the urban planning guidelines approved by the urban authorities and with the participation and support of all the administrations and public companies in the shareholding of the company.

BILBAO RÍA 2000

Developer - Bilbao Ría 2000

Location - Bilbao, Spain

This transformation of the city is creating an economic fabric focused on services, culture and new industries.

The industrial crisis of the 1980s greatly affected Bilbao. The closure and modernization of important industries was a great impact for the entire return of the estuary and, at the same time, an opportunity to recover land of great value for the city.

€ 220 million
Investment

60 ha
Site area

2002 Aerial view

2019 Aerial view

CITY-WATERFRONT RELATIONSHIP

The city of Barakaldo had lived many years turning its back to the waterfront, the Urban-Galindo development project changed this by including a sequence of parks, plazas and promenades which took the city centre a step nearer to the water with the opening of Plaza de Pormetxeta. This has highly contributed to make the city more available for walking and recreation.

CONNECTIVITY

Improving connectivity and accessibility between the centre of Barakaldo and Urban-Galindo has been a priority for the renewal master plan. The new pedestrian ramps, allow a cross transit between different spaces of Urban-Galindo, starting from Pormetxeta street, solving the problems derived from the steep slopes between the two zones.

Recovering a system of public spaces unusable by the impact of traffic and congestion and achieving the revitalization of a very degraded urban centre was also capital. Therefore an intermodal public transport with non-motorized modes has been promoted. The road structure has also been streamlined to facilitate transits and avoid their impacts as much as possible.

NATURAL ENVIRONMENT

The Urban-Galindo project has recovered the contaminated industrial land to open Barakaldo to the river. Architecture and careful urban landscaping were used to create an amphitheatre from which you can visualize the surroundings, enhancing the perception and experience of the estuary. Shrubby plants and trees function as curtain walls separating sports fields from spaces with wooden benches. Industrial reminiscences have been recreated with Corten steel pergolas as well as quarry stone blocks.

KNOWLEDGE AND CULTURE

Architecture has been used as a main driver in the urban renewal. There has been a strong commitment to developing high quality architecture, closely related to cultural activities. Most of the projects have been developed through urban planning, architecture or landscaping competitions.

One of the icons that was first built was the Nuevo Lasesarre, by the architect Eduardo Arroyo (NO.MAD), a stadium that has won many awards for its architectural quality as well as his other work within the master plan: the Desert Plaza.

MIXED-USES DEVELOPMENT

Barakaldo's Urban-Galindo 60 ha project is one of the most representative interventions in Metropolitan Bilbao. During the twentieth century these riverside lands of the manufacturing municipality hosted enormous factories and chimneys of what was the most important company in the country: Altos Hornos de Vizcaya. The crisis of the late eighties and early nineties led to the closure of the company and these extensive lands were freed becoming large spaces of opportunity. At the end of the last decade of the last century, the Bilbao Ría 2000 company designed a master plan for the area where homes, industrial buildings, green areas, sports infrastructure and new roads were included.

Land use

- 2,800 homes (20% social housing)
- 35,000 sqm for qualified industrial and business uses of various types
- 35,000 sqm of commercial premises on the ground floors of residential buildings
- 44,000 sqm for a “leisure park”, and sports centre, Lasesarre Soccer Field
- 17.6 ha of parks, open spaces and green spaces

Development phasing

Urban-Galindo is divided in two development areas:

- Lasesarre/Galindo North: fully completed
- Galindo East: under development

Desert Plaza

GOVERNANCE AND IMPLEMENTATION

Land ownership

Urban-Galindo develops on public land that has been ceded by the different administrations.

Project leadership

This is a public led development by Bilbao Ría 2000. Its legal form is that of a corporation, although all its capital is public. The aim was to create a flexible organization, to make important decisions with agility.

The company´s composition includes all administrations. It is 50% formed by the Central State Administration and 50% by the Basque Administrations. Its Board of Directors contains the main political representatives of the Administrations that are part of the Company. Its President is the Mayor of Bilbao and its Vice President the Secretary of State for Infrastructure and Transport of the Ministry of Public Works.

Stakeholders

On the technical level, the urban transformation of Bilbao has involved professionals from many disciplines, mainly, architects and civil engineers. Bilbao Ría 2000 has favoured a forum of the main agents interested in the transformation of the territory and its municipalities and the great companies installed in the area.

Community engagement

The social component of the project has been crucial, since it affected 15,000 citizens from the city centre, in a neighbourhood with high unemployment rates. Therefore, increasing social care services and providing new learning and labour insertion schemes, were clear priorities which required of new facilities.

TIMELINE

1992

Bilbao Ría 2000 Society established

1995

Integrated Plan for Barakaldo included in URBAN-Spain

1998

Start of Urban Galindo project

1999

Bilbao Ría 2000 agreement subscribed

2003

Opening of Desert Plaza

2007

Opening of Barakaldo Football Club Plaza

2010

Opening of Pormetxeta Plaza

ISOCARP Urban Excellence Award

2017

Urban planning modifications Galindo East

INVESTMENT

The total investment to be made by Bilbao Ría 2000 in Urban-Galindo, is estimated to around 220 million euros. In addition to urbanization costs, it includes the Sports Centre and the Soccer Field Lasesarre and CEDEMI, a business incubator in a refurbished old power plant.

Programming period 1996-1999

The project received from the European Union 9.4 million euros of the 18.9 that were invested in this period.

Programming period 2000-2006

The total investment was 23,450,000 euros and EU investment provided 10 million euros. This EU funding was part of the URBAN framework programme aimed at economic and social regeneration of cities and neighbourhoods in crisis, in order to promote sustainable urban development.

Investment strategy

Bilbao Ría 2000 was born with an initial contribution of 1.8 million euros and over the years the company has demonstrated capacity to achieve its financial balance without resorting to the public budgets of the partners. This self-financing has been possible thanks to the fact that the shareholders, all of them institutions and public companies, have ceded land in disuse that they had in central areas of the metropolis to modify the intended uses on those plots.

Bilbao Ría 2000 invests in the cleaning and complete urbanization of these urban spaces, addressing large-scale projects, and finally sells the resulting plots to private developers. Since this is a nonprofit making entity, the profits are then re-invested in urban regeneration projects. It also strives continuously to increase resources by procuring subsidies from the European Union, representing 14% of the total investment budget to date.

REAL ESTATE COMMERCIALIZATION

In order to achieve maximum architectural quality, a new model was tested for developing residential plots. First, a competition for local architects was held for the design of the buildings; secondly, the awarded architects would produce the basic projects. Once the projects were finished, the developers had to bid for the plot with the defined project and its architect. Although developers were initially reluctant to follow this procedure, the result was a success.

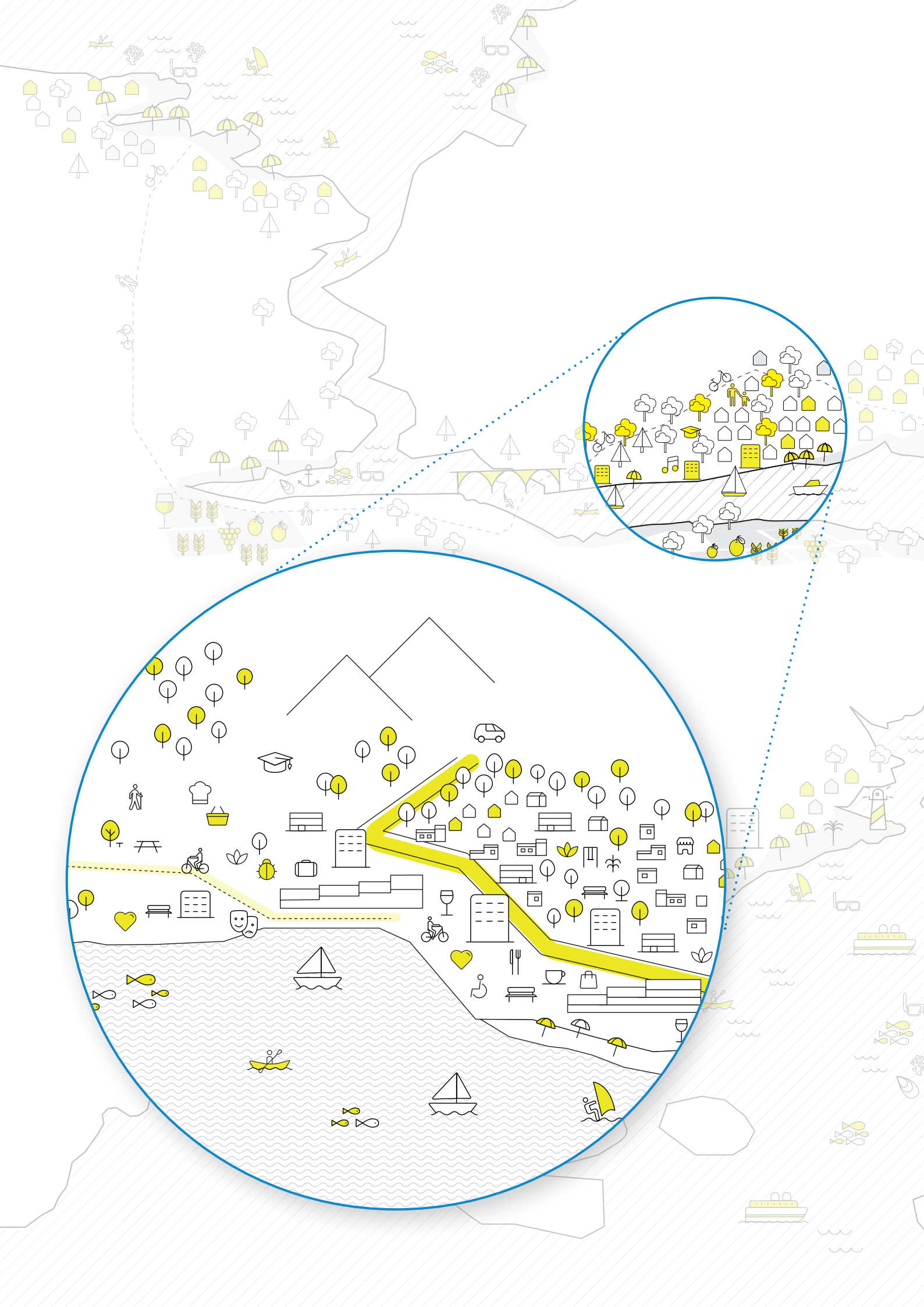
KEY SUCCESS FACTORS

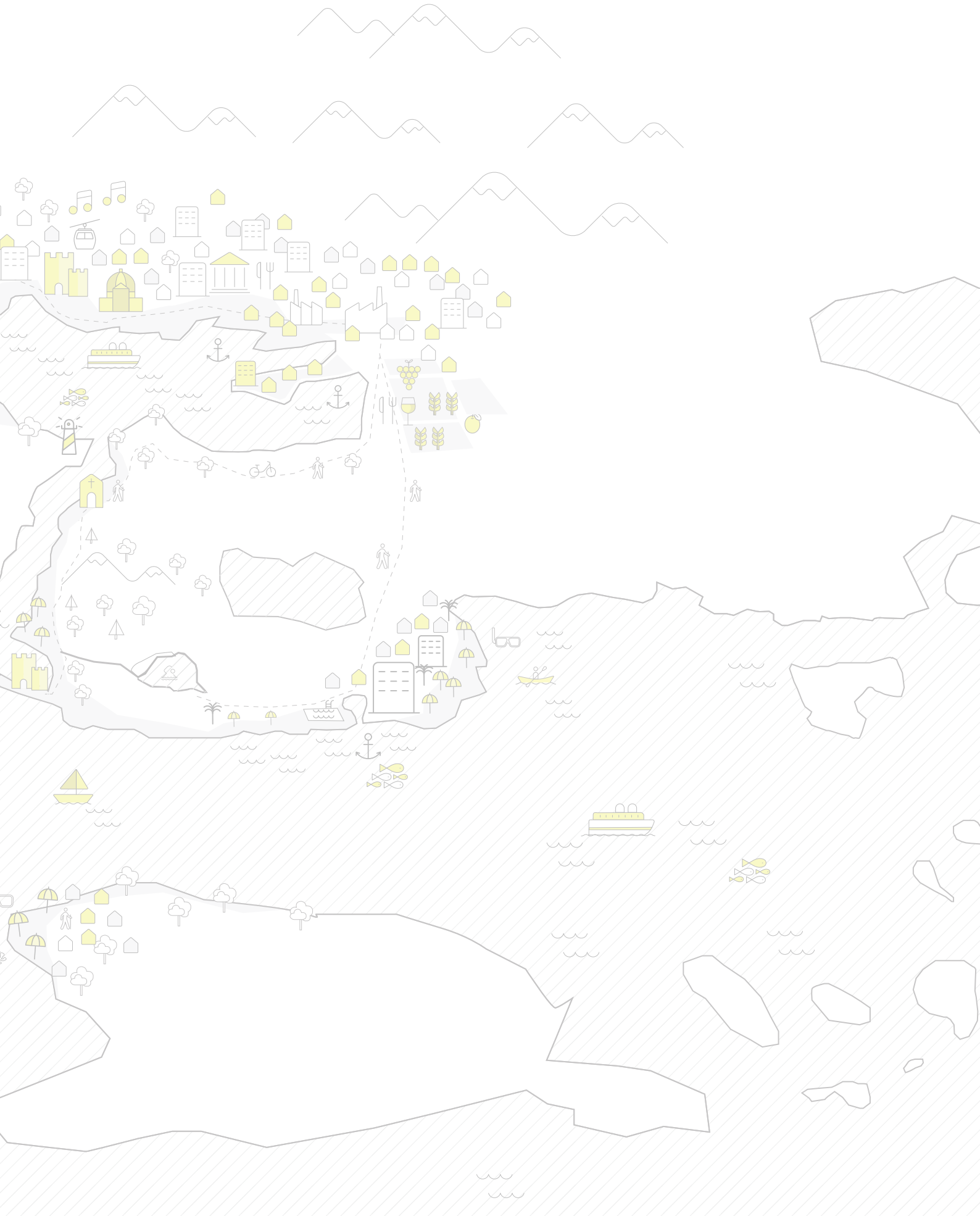
Bilbao Ría 2000 has been an example of collaboration between institutions. Equally distributed capital is represented by the State through public companies (Port of Bilbao, land developer Sepes and railways Adif and Feve), the Basque Government, the Diputación de Bizkaia and the municipalities of Bilbao and Barakaldo.

This enables a remarkable agility and versatility in the management along with an efficient use of human resources and technicians available to Bilbao Ría 2000.

It also generates a better perception by citizens derived from the coordination of the institutions at all levels to achieve the objectives of the actions planned by the Company. A better economic performance increases greater possibilities of action in the Metropolitan Area.

Another key to the success of Bilbao Ría 2000 has been to combine planning long-term projects with short term performance. This allows citizens to visualize the project in the short term.





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