

Strategic Master Plan for the Waterfront of Paramaribo

Comprehensive design strategies for a sustainable and lively waterfront

Stage 2: Re-evaluation from participatory input



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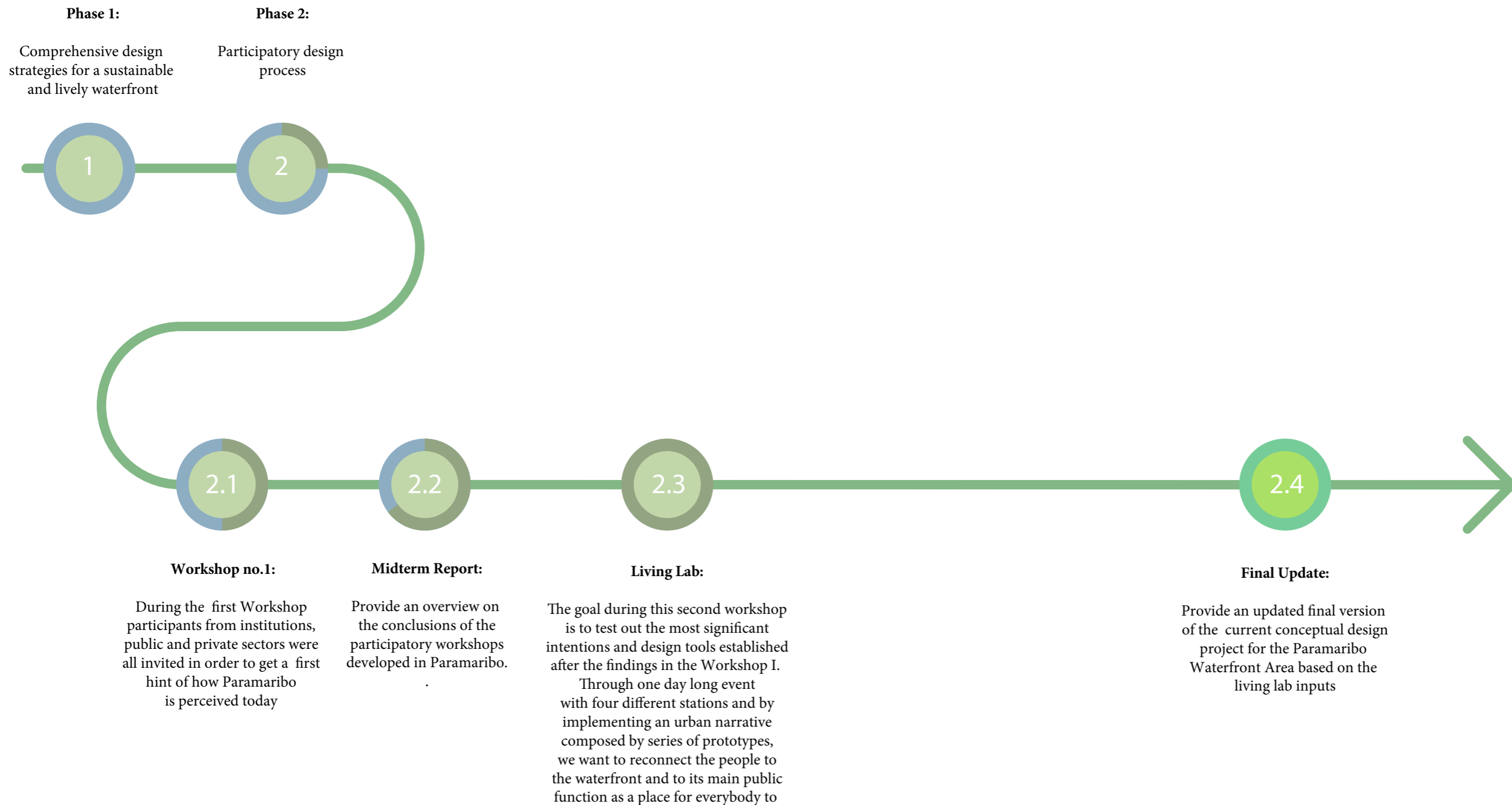


February, 2018

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Overview of the Paramaribo Waterfront Masterplan and urban design Project



1.

**Overview from the Stage 1: Master
Plan Report February, 2017**



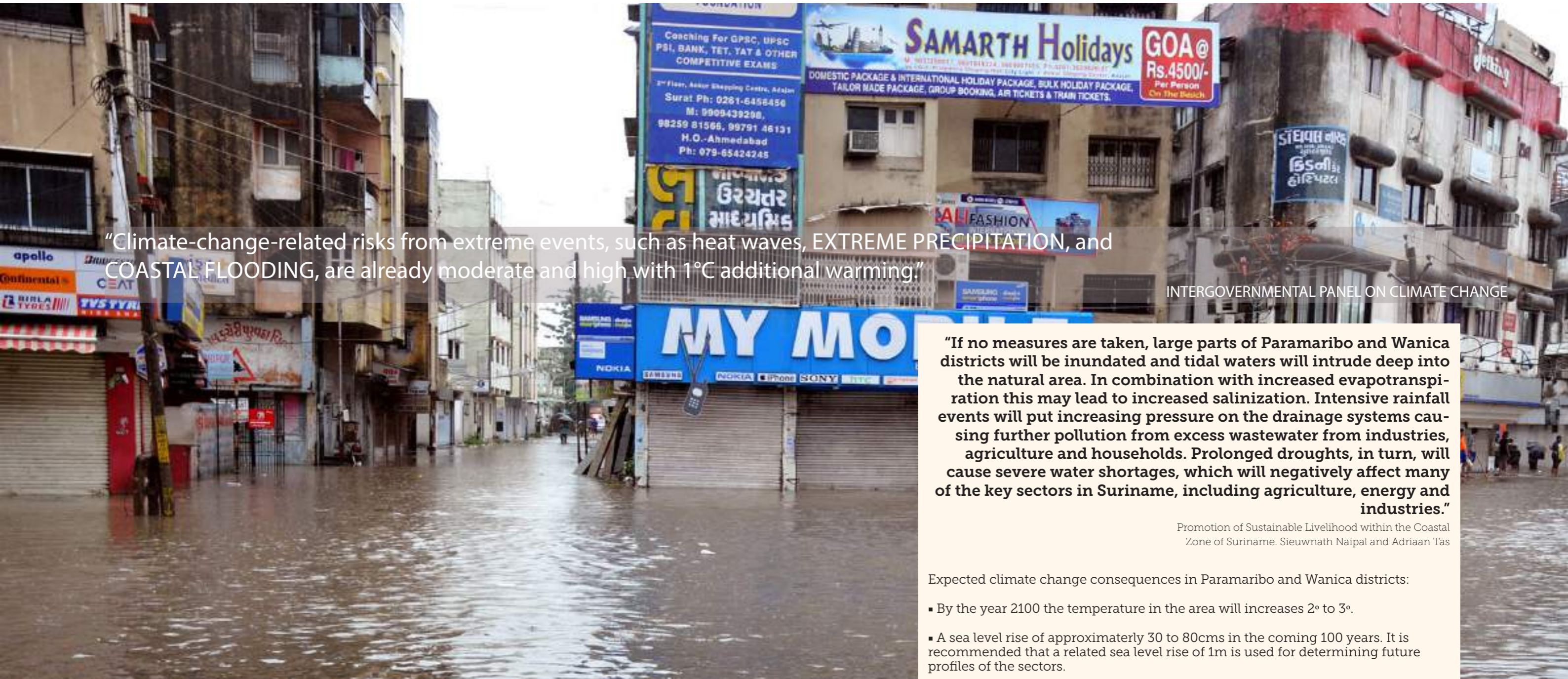
“human activities have been substantially increasing the atmospheric concentrations of greenhouse gases (...) these increases enhance the natural greenhouse effect (...) this will result on average in an additional warming of the Earth’s surface and atmosphere and may adversely affect natural ecosystems and humankind.”

UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE.

“Suriname ranks with the small island states as being among the most vulnerable nations in the world to the impacts of accelerated sea level rise (...) Paramaribo and Wanica, which account for more than 80% of the country’s GDP are the most vulnerable districts in terms of economic losses and impacts on the population”.

“The World Bank has listed Suriname as one of the 10 most vulnerable countries in terms of impacts on GDP, agriculture, population and urban areas”.

Promotion of Sustainable Livelihood within the Coastal Zone of Suriname. Sieuwnath Naipal and Adriaan Tas



“Climate-change-related risks from extreme events, such as heat waves, EXTREME PRECIPITATION, and COASTAL FLOODING, are already moderate and high with 1°C additional warming.”

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE

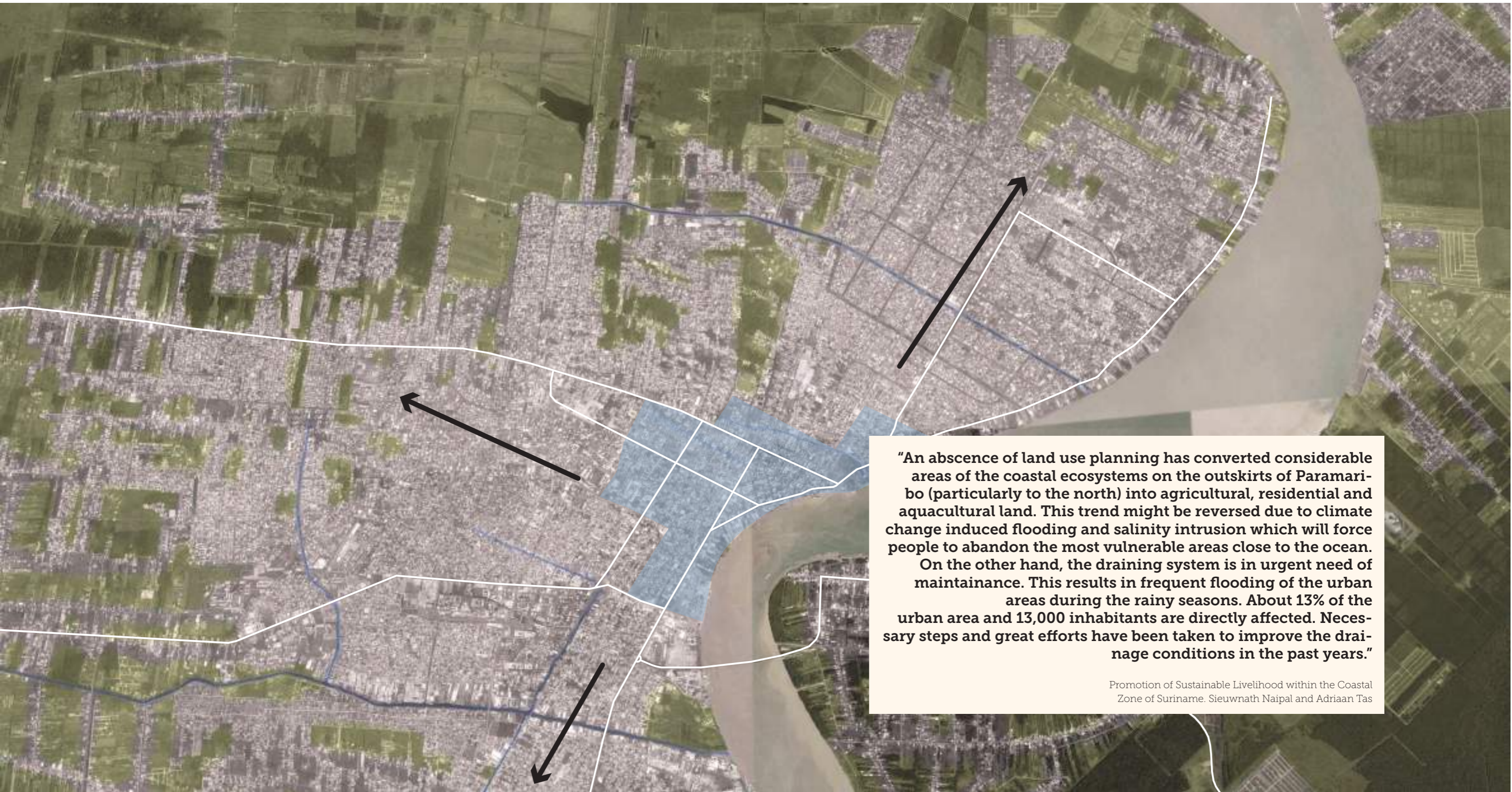
“If no measures are taken, large parts of Paramaribo and Wanica districts will be inundated and tidal waters will intrude deep into the natural area. In combination with increased evapotranspiration this may lead to increased salinization. Intensive rainfall events will put increasing pressure on the drainage systems causing further pollution from excess wastewater from industries, agriculture and households. Prolonged droughts, in turn, will cause severe water shortages, which will negatively affect many of the key sectors in Suriname, including agriculture, energy and industries.”

Promotion of Sustainable Livelihood within the Coastal Zone of Suriname. Sieuwnath Naipal and Adriaan Tas

Expected climate change consequences in Paramaribo and Wanica districts:

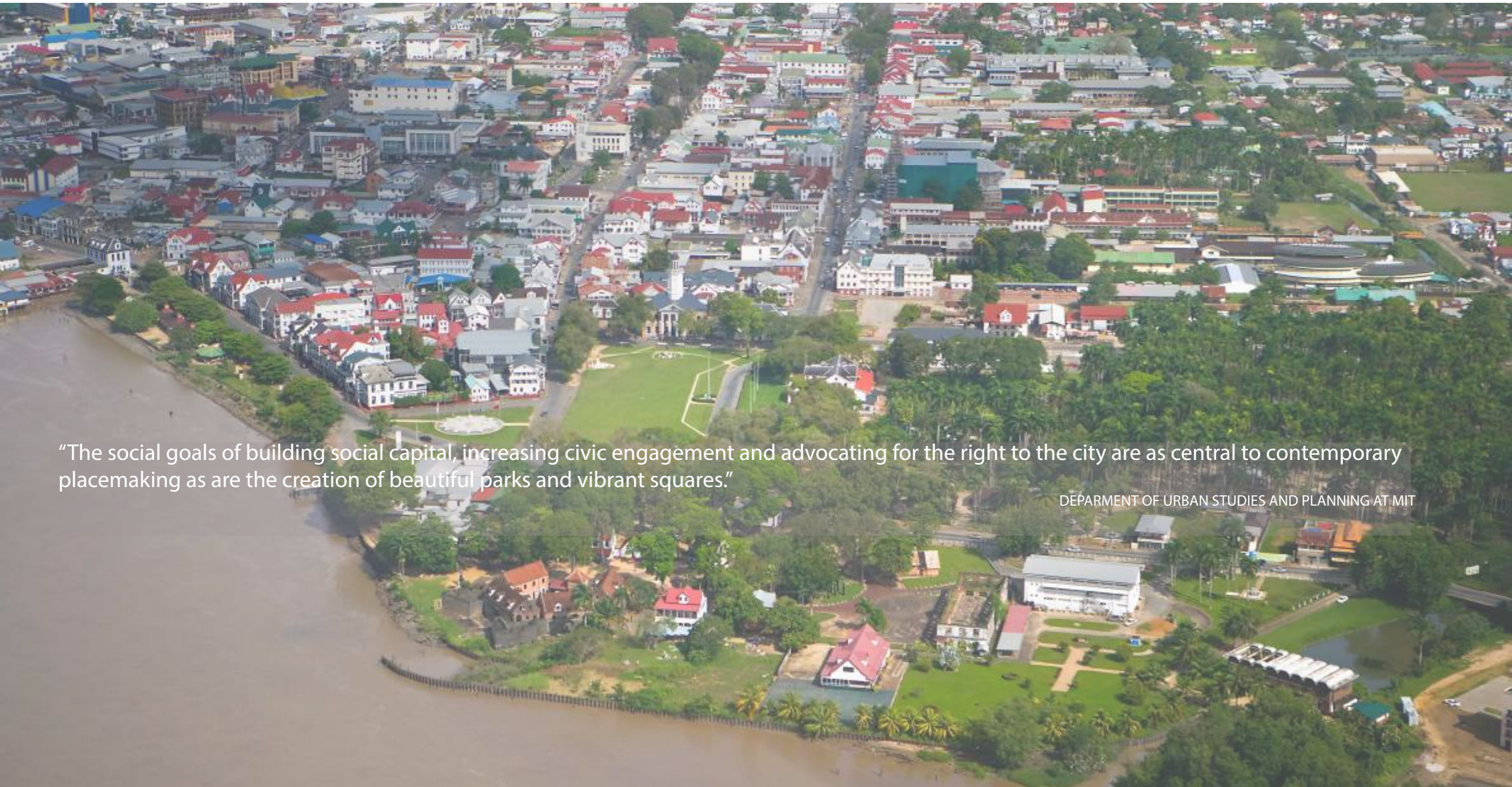
- By the year 2100 the temperature in the area will increase 2° to 3°.
- A sea level rise of approximately 30 to 80cms in the coming 100 years. It is recommended that a related sea level rise of 1m is used for determining future profiles of the sectors.
- Subsidence of 20 to 40 cm, due to human activities in the coastal zone.
- Storm surges of 20 to 30cms fostered also by change in the wind velocity and wind direction.

The IPCC Fourth Assessment Report



"An absence of land use planning has converted considerable areas of the coastal ecosystems on the outskirts of Paramaribo (particularly to the north) into agricultural, residential and aquacultural land. This trend might be reversed due to climate change induced flooding and salinity intrusion which will force people to abandon the most vulnerable areas close to the ocean. On the other hand, the draining system is in urgent need of maintainance. This results in frequent flooding of the urban areas during the rainy seasons. About 13% of the urban area and 13,000 inhabitants are directly affected. Necessary steps and great efforts have been taken to improve the drainage conditions in the past years."

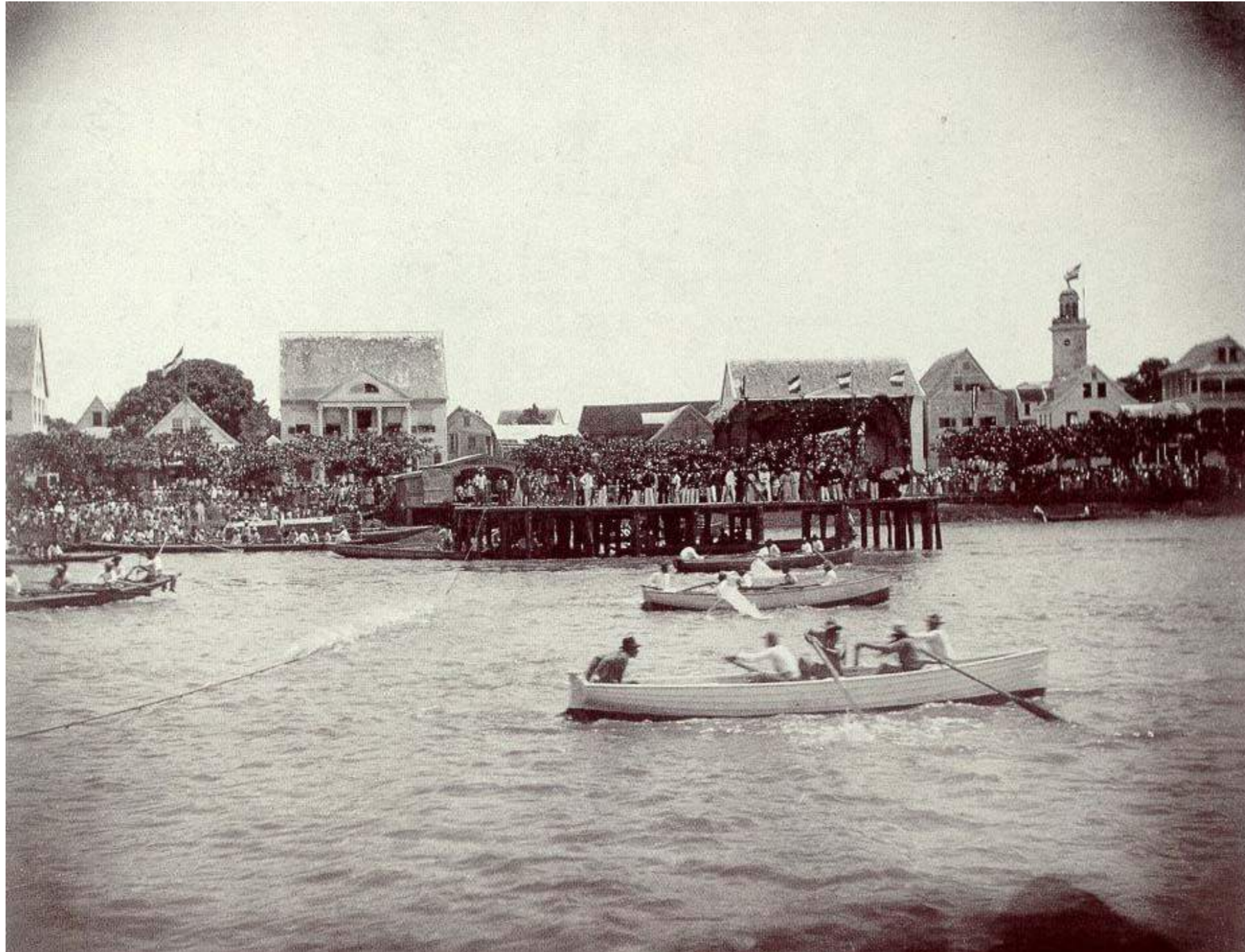
Promotion of Sustainable Livelihood within the Coastal Zone of Suriname. Sieuwnath Naipal and Adriaan Tas



“The social goals of building social capital, increasing civic engagement and advocating for the right to the city are as central to contemporary placemaking as are the creation of beautiful parks and vibrant squares.”

DEPARTMENT OF URBAN STUDIES AND PLANNING AT MIT

1.1. Current situation in Paramaribo as a framework



View of Paramaribo's waterfront,
1893.

This document presents the first stage of Master Plan for the Waterfront of Paramaribo and the design strategies that will create a sustainable and lively waterfront. Being designated as a Cultural World Heritage area by UNESCO, Paramaribo has the challenge to value, preserve and revitalize the historic city center and to capitalize on its privileged relation with the Suriname River. The waterfront is the area's main public space. Although currently underused, this stretch of 1.3 km is one of the few remaining public and open riverfront areas in the city. It is also surrounded by some of the most emblematic historic architecture.

The waterfront provides a unique opportunity to reimagine the center as a vital area of residence and public encounter and as a main core of everyday leisure activities and yearly events. There is also an urgent need to rethink the city's relation with water, as the city is one of the most vulnerable districts in Suriname in terms of economic losses and impacts of climate change. It is expected that in the next decades Paramaribo will confront sea-level rise, an increased climate variability which in turn will bring abundant rainfall in shorter periods of time as well as longer droughts. New strategies to adapt and mitigate these changes need to be implemented.

1.2. Main concept design and design tools

Today, urban areas located near water bodies are not only threatened by the increasing effects of global warming, but by a scarcity of public spaces. This condition is a key opportunity for policy makers, urban designers and city dwellers to create ways to build **RESILIENT PUBLIC SPACES** that are both able to adapt and mitigate the consequences of climate change and to respond to the rising need to build social capital in today's societies.



WATER MANAGEMENT STRATEGIES



LIVELY PUBLIC SPACES

RESIST + DELAY + STORE + DRAIN

RECONNECT + USE



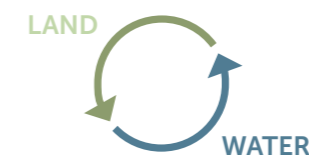
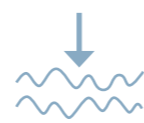
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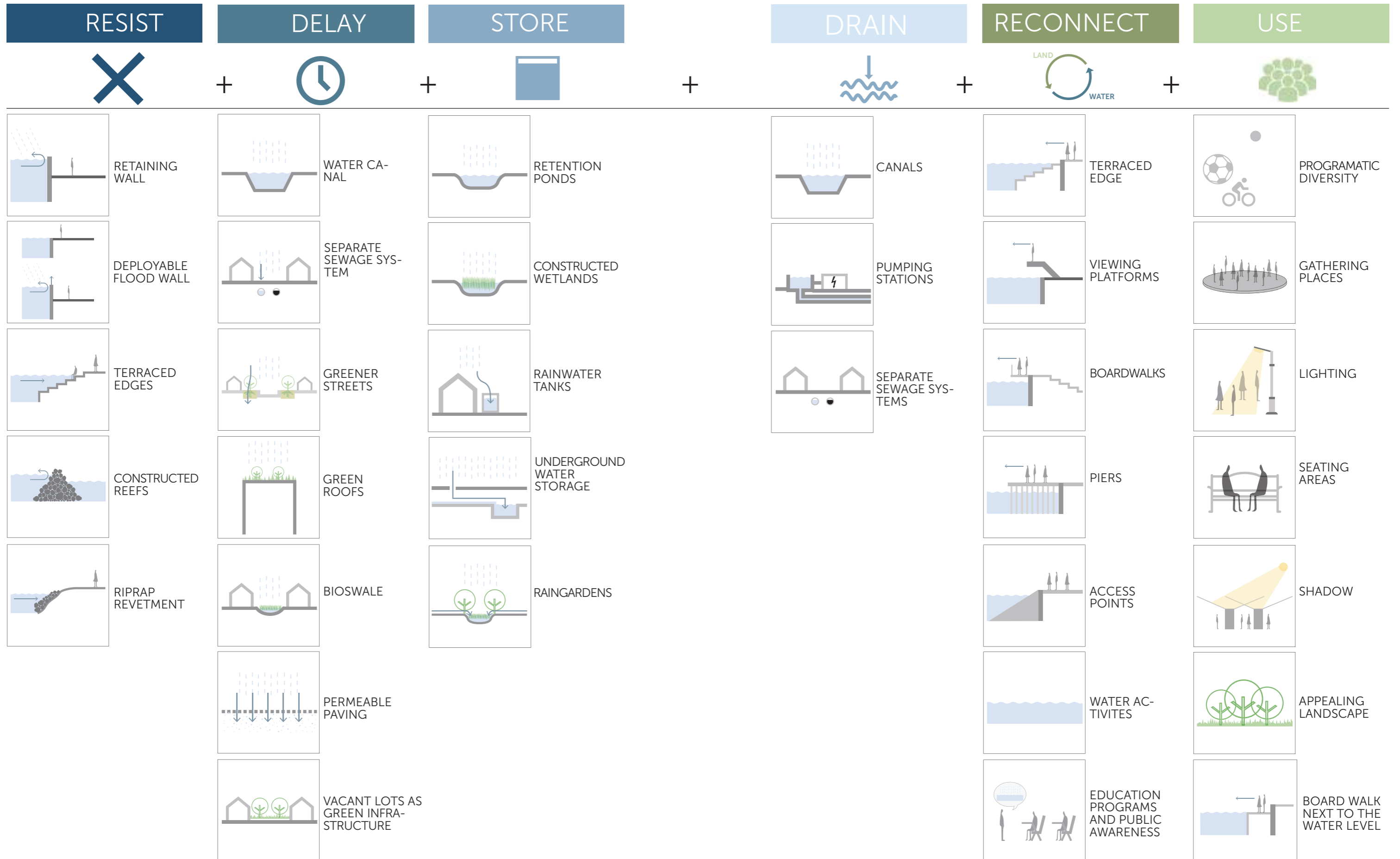





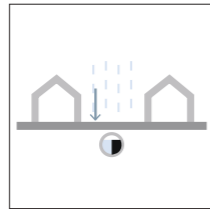
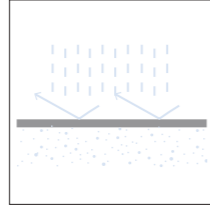
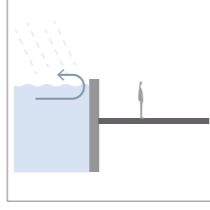
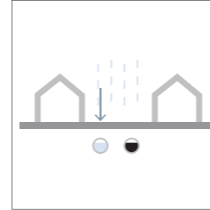
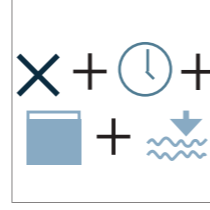
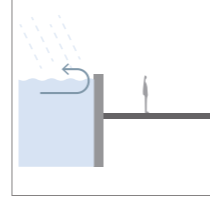
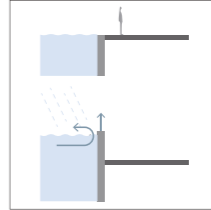
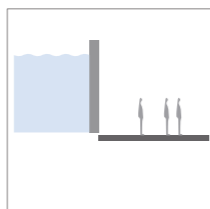
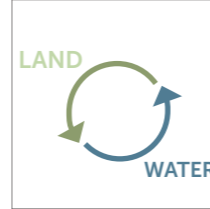
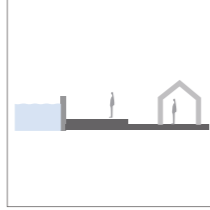

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**RESILIENT AND LIVELY
PUBLIC SPACES**

STAGE 1



<ul style="list-style-type: none"> • City center • Área of influence • Waterfront 	<p style="text-align: center;">BUSINESS AS USUAL</p>	<p style="text-align: center;">SCENARIO A</p>	<p style="text-align: center;">SCENARIO B</p>
	 <p style="text-align: center;">DEFENSIVE: EXCLUSION OF WATER FROM PUBLIC SPACES</p>	 <p style="text-align: center;">INTEGRATED: MAKING SPACE FOR WATER WITHIN PUBLIC SPACES</p>	 <p style="text-align: center;">INCREMENTAL STRATEGIES</p>
<p>1. Water management strategies</p>	 <ul style="list-style-type: none"> • Maintainance of the combined system of storm-water and waste water management that drains directly into the river. Extension of water pumps if required.  <ul style="list-style-type: none"> • Extension or continous use of impervious surfaces will increase stormwater runoff.  <ul style="list-style-type: none"> • Extension of embankment wall to protect the waterfront from erosion and river floods. 	 <ul style="list-style-type: none"> • New system to separate stormwater runoff and waste water. • Proper maintainance to structures such as open and closed waterways, channels, pumps and sluices, a.o. • Enhance the current flood early warning system. • Sustainable water management strategies to delay, retain, store, reuse and drain stormwater.  <ul style="list-style-type: none"> • Incentives to reduce imprevious surfaces both in public and private areas, and rebuild streets with new standars to delay and infiltrate water. • Adding green shores, riverbanks and streescapes to reduce the impact of the heat island effect and create recreational possibilities. • Use of cool paving and building materials that reflect sunlight or are less heat absorbent.  <ul style="list-style-type: none"> • Continuation of concrete retaining wall to protect the waterfront from erosion and river flood with proper sewage outlets. • Sewage infraestructure rehabilitation near and along the waterfront. 	 <ul style="list-style-type: none"> • Study of alternatives of temporary flood protections (deplyable retaining wall, sand bags, inflatable constructions or stop logs, or a quay). • Development of a comprehensive and integrated Urban Water Plan. • City in a Delta: Articulate plan within a Coastal Management Plan for the Paramarivo Wanica coastal zone, focusing on coastal protection and climate change impacts, including sea level rise.
<p>2. Public space design</p> <p>i. Relation with the river</p>	 <ul style="list-style-type: none"> • Further upgrading of the embankment with sheet piling and concrete that keeps limiting the relation between the city and the river. • Exclusion of canals and water from public spaces. 	 <ul style="list-style-type: none"> • Creation of strategies to re-connect public space with water that enhances the quality of urban areas with elements such as terraced edges, viewing platforms, water features and bridges, a.o. • Integrate clean and healthy water into public spaces for recreation and educational purposes. • Interactive water features and educational activities that raise awareness about climate change. The waterfront can become a learning environment. 	<ul style="list-style-type: none"> • Use drainage canals that parallel many streets as connectors between public spaces. The canal system can be used as a secondary pedestrian and cyclist route.
<p>ii. Uses and activities</p>	 <ul style="list-style-type: none"> • Separation of public spaces from the river. Continuation of the retaining wall. • No new investments in the embankment areas, maintainance of the craft and food stands. 	 <ul style="list-style-type: none"> • Creation of a pedestrian and cyclist circuit around the historic center. • Location of a variety of public amenities and playing areas along the green infraestructure circuit that attracts a diversity of users and extends the time-lapse use of the waterfront. • Location of canopies that can protect visitors and the craft market, a.o, from tropical rainstorm and sunlight. • Plantation of trees in the city center to provide shade and increase walkability of the city. 	<ul style="list-style-type: none"> • Consider a fixed-route circulateor system within the city center to complement walking as a means to navigating the area. • Articulate public spaces to early warning d response systems. • Create a permanent structure for the bus terminal out of the city center to enhance the quality of public areas. • Organization of parking areas in the city center.

1.3. City center area of influence, a comprehensive strategy to revitalize the historical center.



View of the retaining wall at Fort Zeelandia.

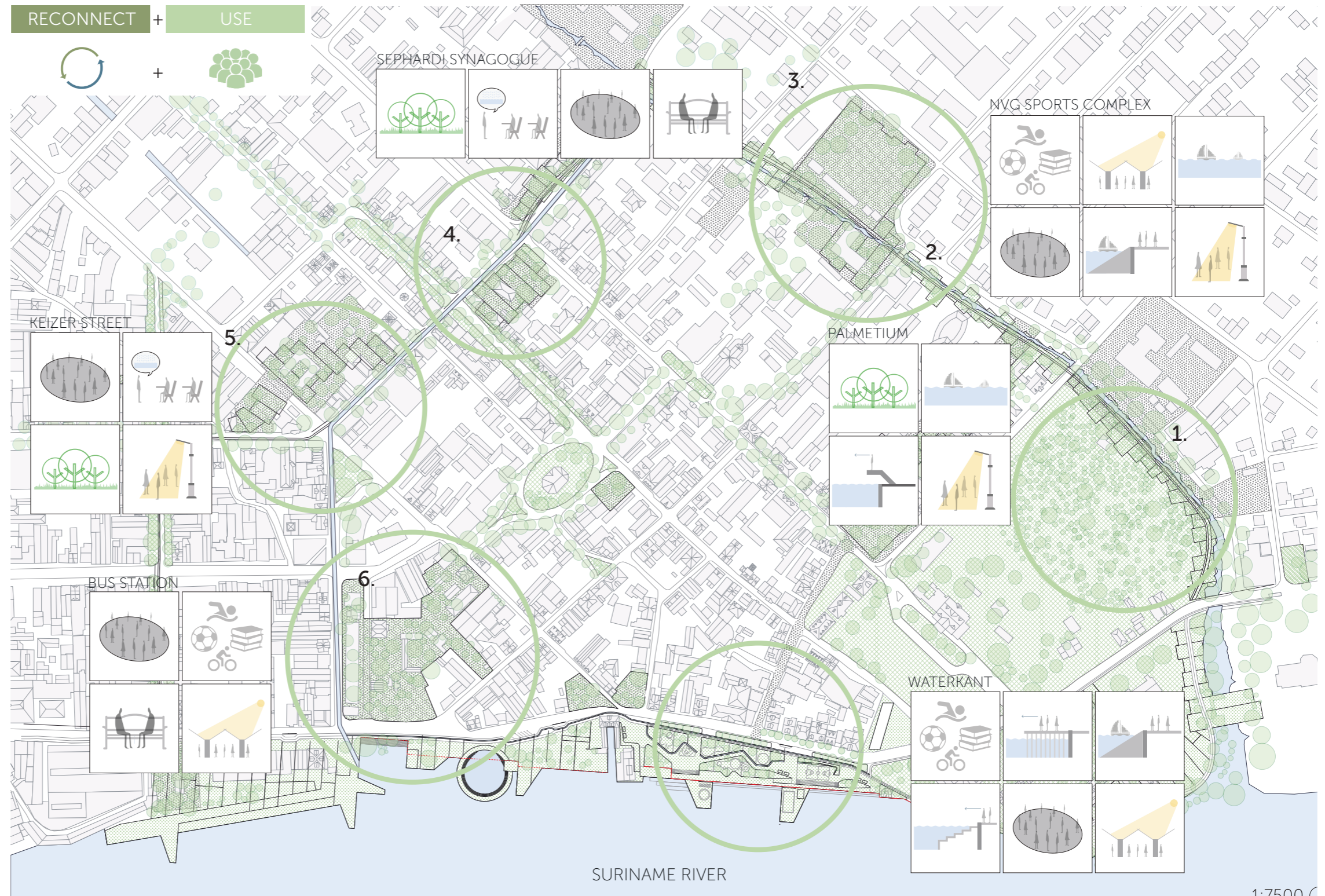


Example of an enhanced relation with watercourses.
Equipo Mazzanti + Geografia Urbana

Rather than shifting the problem to more downstream lying parts of the water system, the philosophy has become “first retain, then store, only then discharge”.

Nationaal Bestuursakkoord Water, 2003. Dutch National Policy on Water Management for the 21st Century.

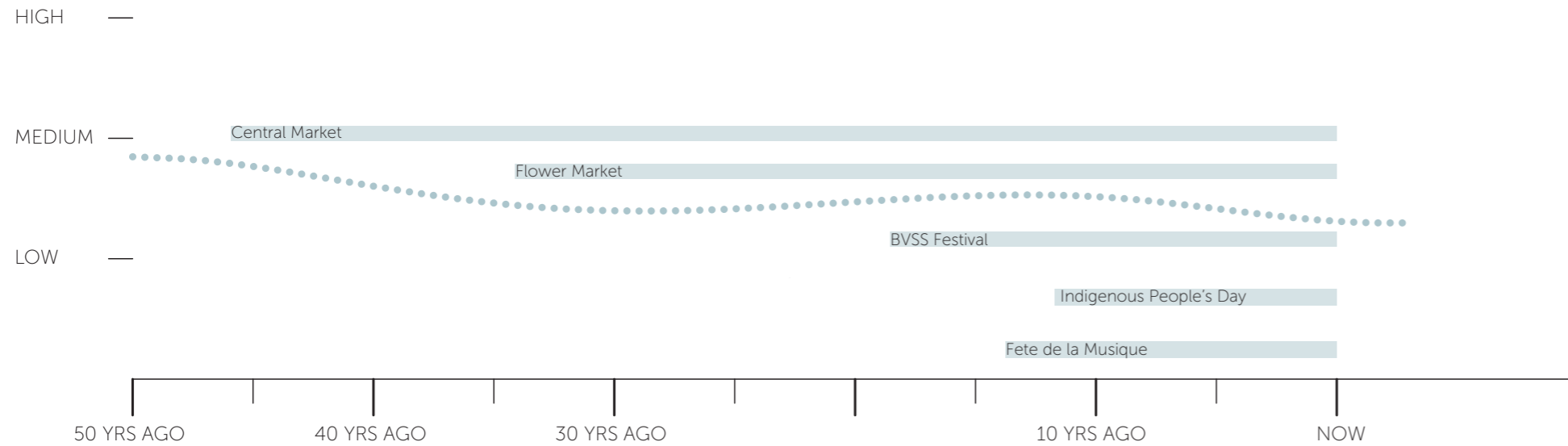
Public Space Strategies



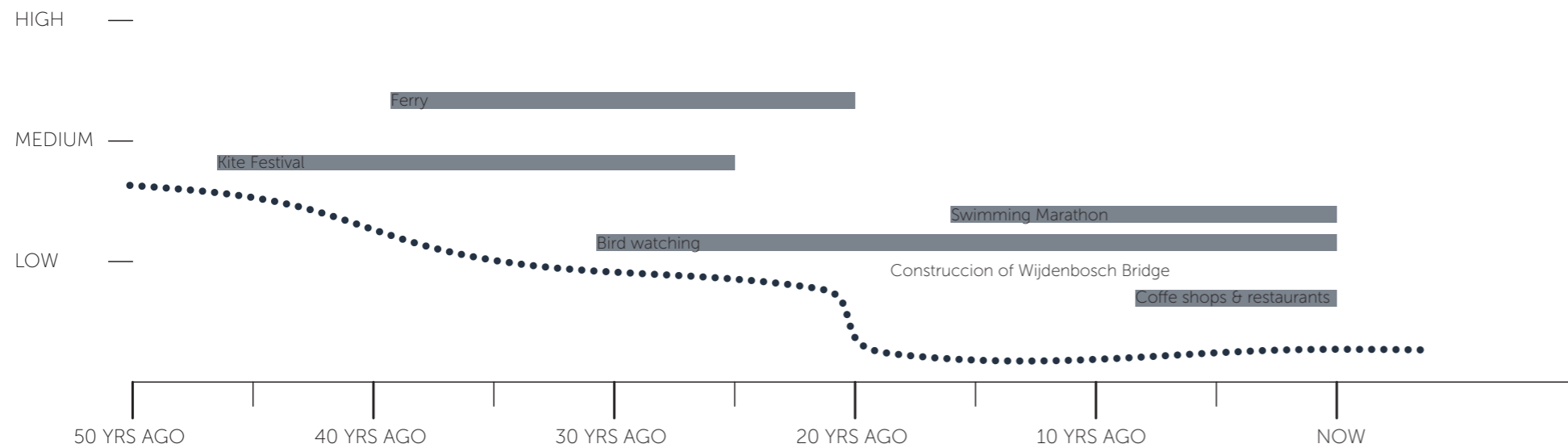
Unlike a border or a limit, the belt is a green pedestrian corridor of connection between the center and other areas. It is a green circuit that allows cyclists and pedestrians to circulate the historic center.

These areas will also provide space for catching and retaining stormwater runoff.

COMMUNITY USE OF PUBLIC SPACE IN THE CITY CENTER



COMMUNITY USE OF THE WATERFRONT



- Photography References:
1. Example of an open library. El Equipo Mazzanti.
 2. Retaining pond as a recreational opportunity. Turenscape.
 3. Canopy. Equipo Mazzanti.

Stage 1: Design proposal for a green and revitalized city center



The center is in need of a revitalization plan that attracts new activities to the area. Given the high percentage of empty lots, parking areas and deteriorated buildings within the center, there is a lack of lively everyday activities and public spaces.

Yet, this condition is also an opportunity to use fill-in strategies that provides a pedestrian network to articulate public spaces.



Nodes of Activity

Specific projects to revitalize the city center



1. Palmentuin



2. Dutch Embassy



3. NGVB Sports Complex



5. Keizer Street



6. Bus station area-The triangle:

This is a key project to connect the waterfront to the center by creating internal public paths. A new program of re-densification that comprises the transport terminal, parking and retail is proposed as a possible public-private initiative. The re-densification of this block seeks to reactivate the area with commercial activities to generate economic activities and provide new amenities to citizens and visitors. (Total area: 5160 sqm).

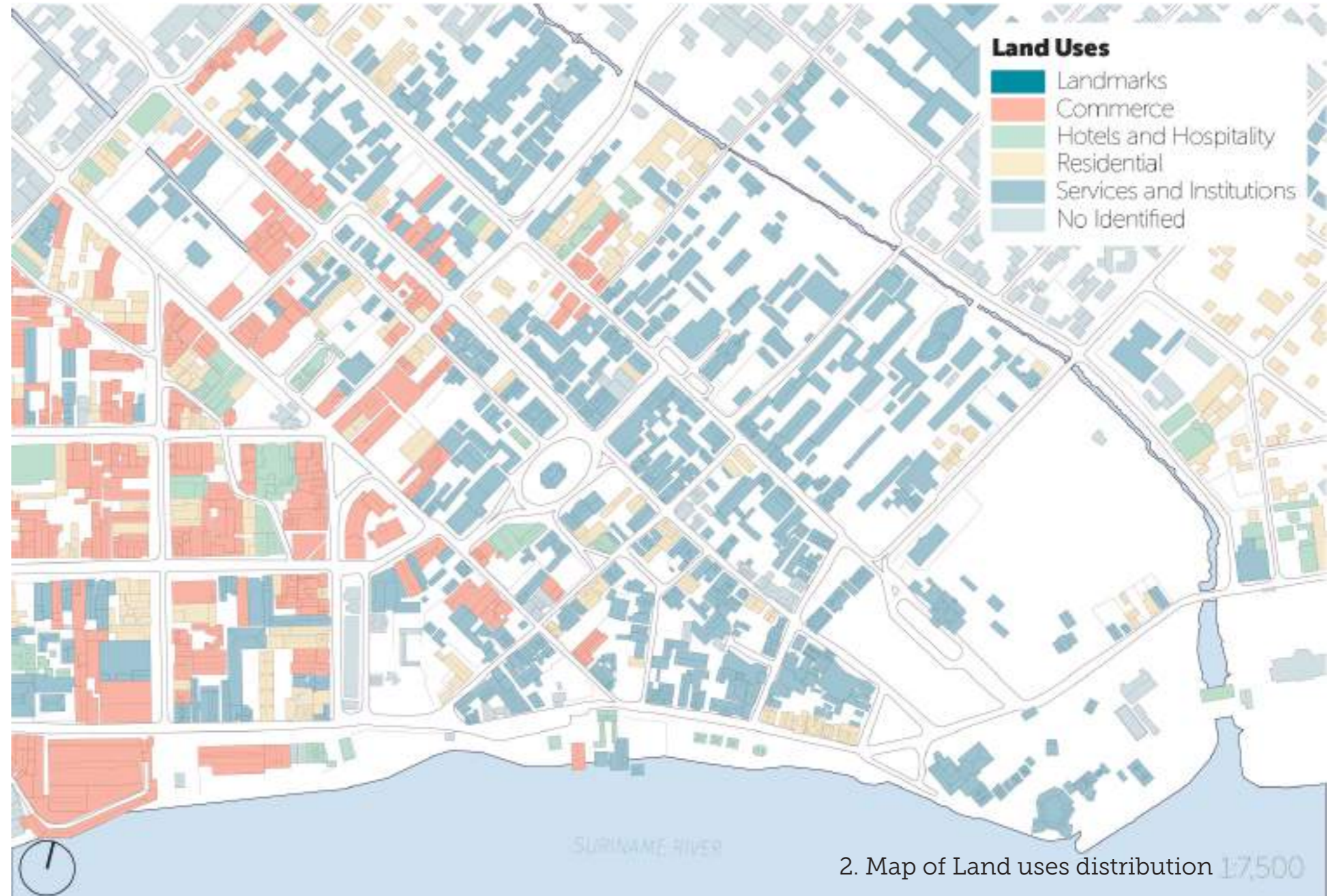
Program:													
Total area: 5160sqm	Bus stop	Parking: 300 cars	Commercial area: 3460sqm	Pedestrian path	Playground	Multipurpose court	Natural pool	Canopy	Pedestrian path	Shaded green paths	Environmental Research Center	Strategic area of activity	Museum

1. Decline of the center's residential character



1. Land uses distribution

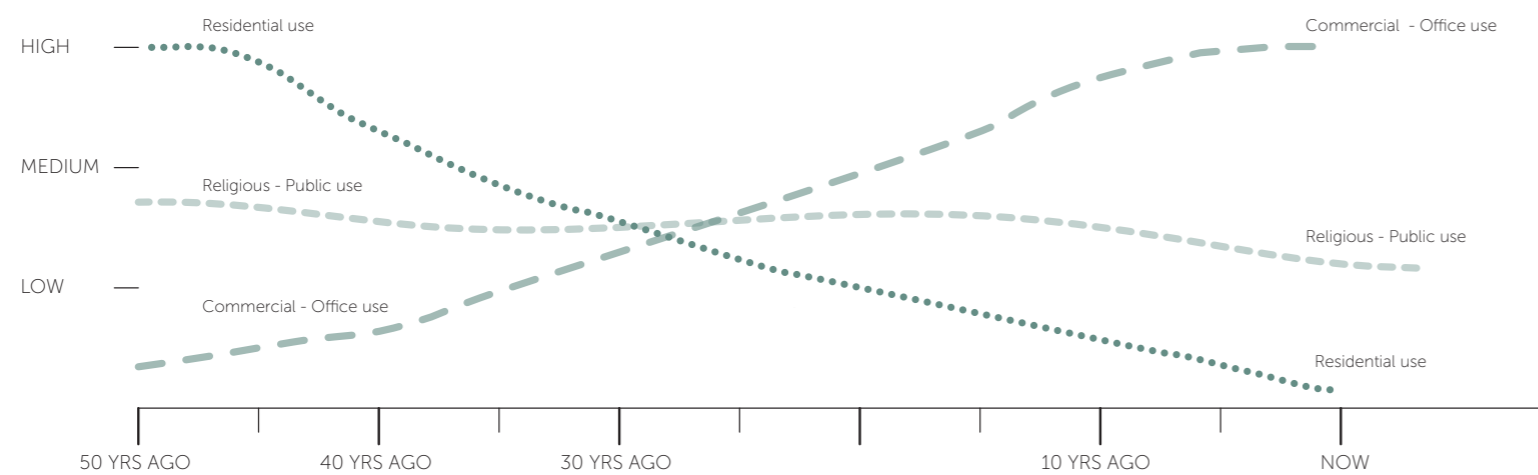
The decline of housing in city-centers is a common phenomenon in many cities throughout the world. The main consequence is transformation of these areas into mono-functional areas with low levels of everyday use and appropriation. In order to counter-act this phenomenon it is strategic to encourage new permanent residents that activate the area on an everyday basis.



2. Map of Land uses distribution 1:7,500



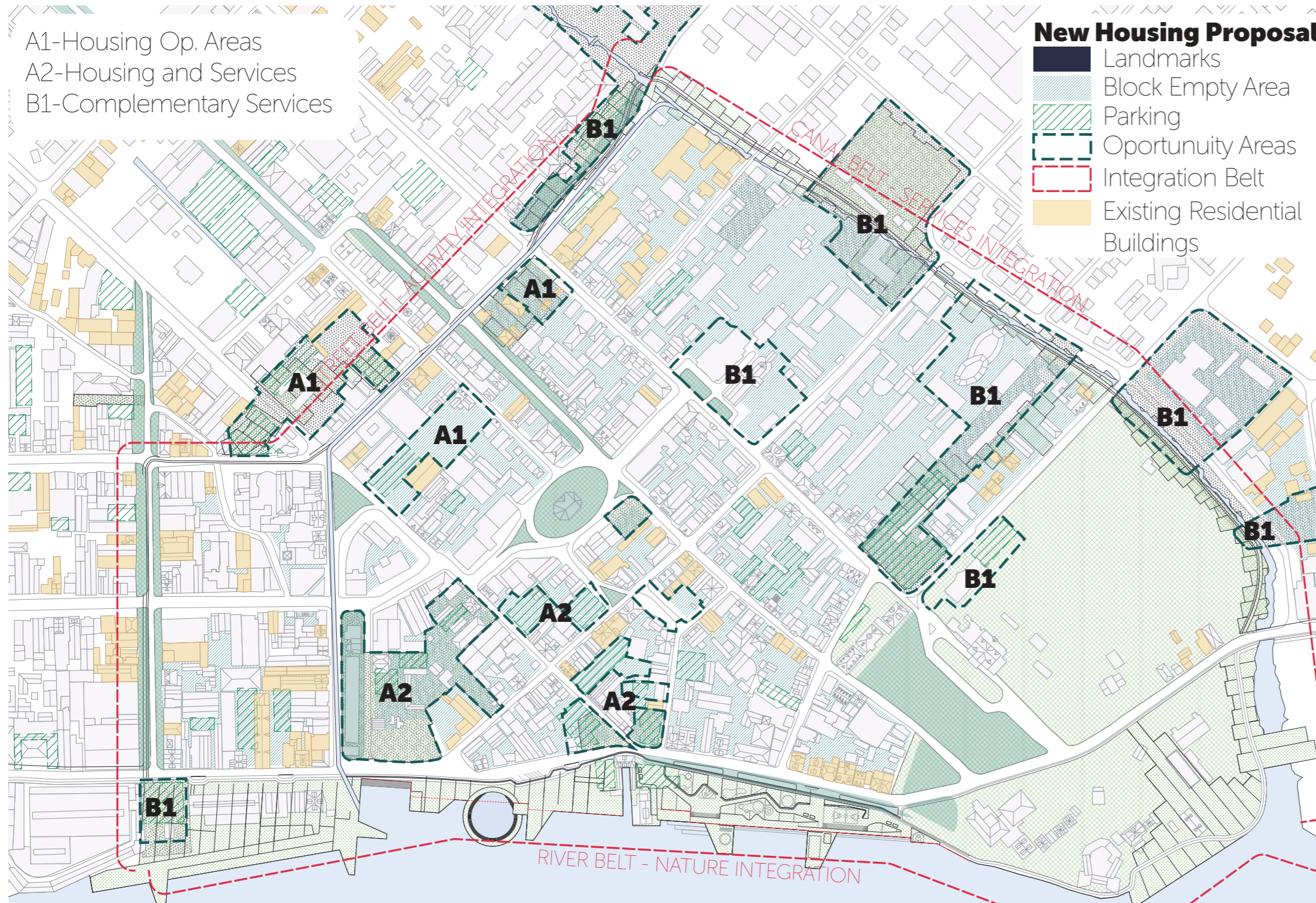
4. Land Uses in Downtown Paramaribo



View of commercial activities in the city center

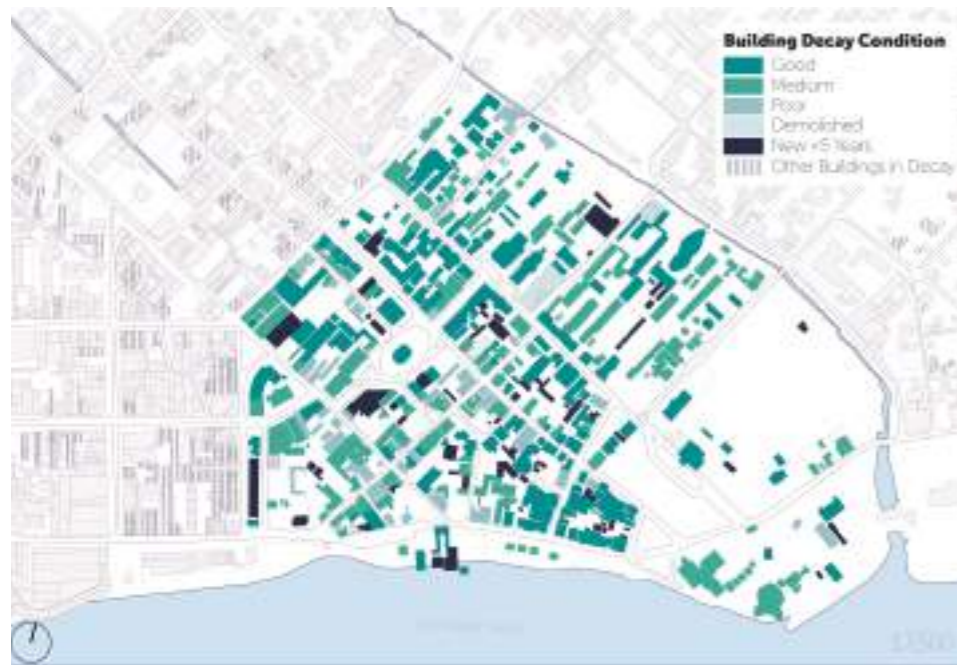
³ Source: The Consultant, based on data from ARTESI.
⁴ Source: The Consultant.

Strategic areas of residential revitalization

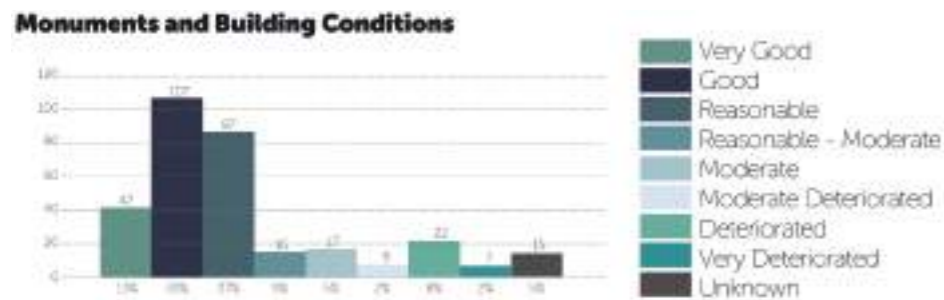


To attract new inhabitants and visitors to the inner city, it is essential to create new public spaces that guarantee a good quality of life.

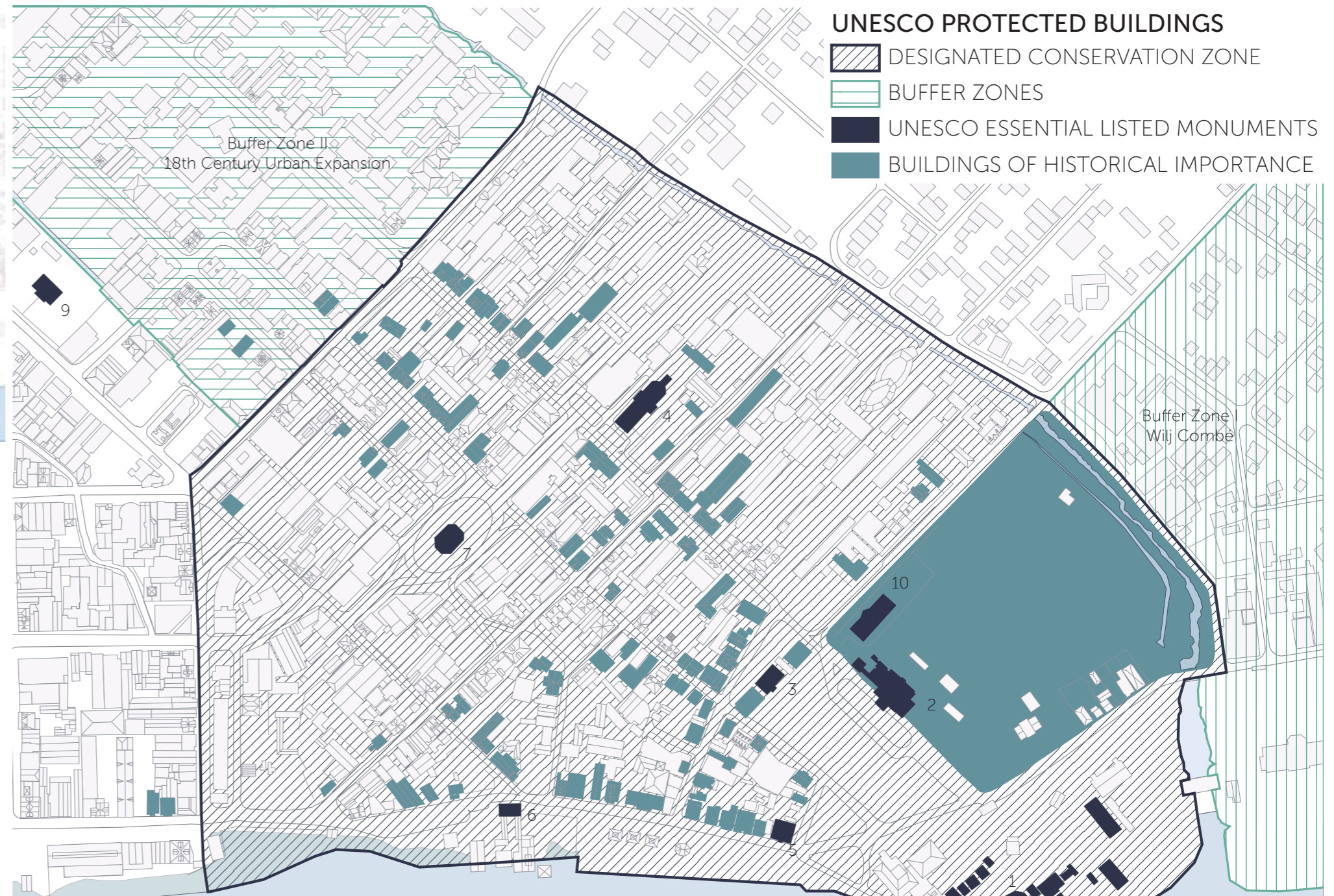
2. Conservation of the historic city and the rehabilitation of its buildings



1. Building Decay Condition



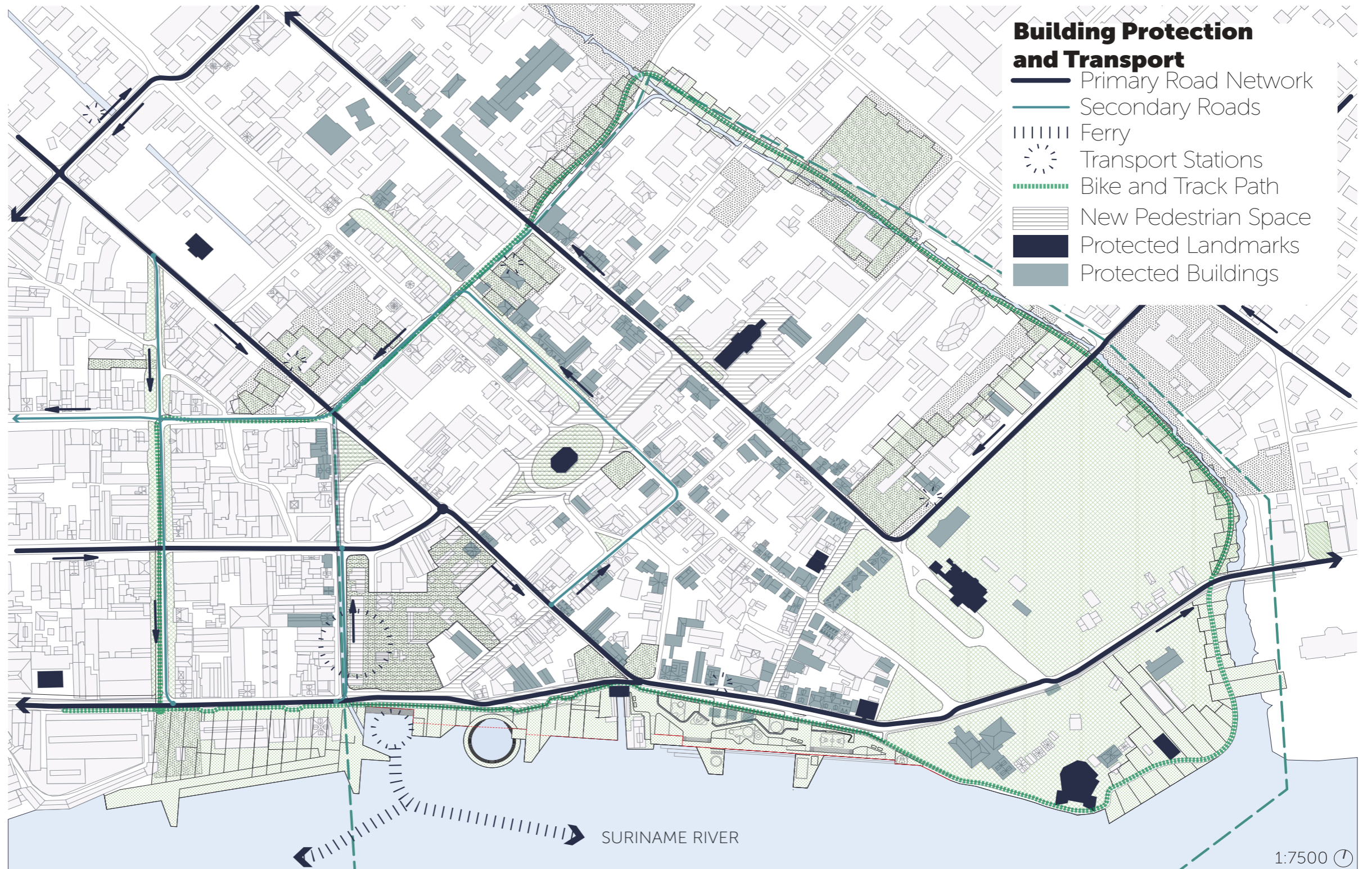
2. Map of Unesco Protected Buildings



3. Map of Unesco Protected Buildings

“The challenge for us today is to conserve the Historic Inner City of Paramaribo World Heritage Site for present and future generations, whilst ensuring that the city continues to function as a living city.”

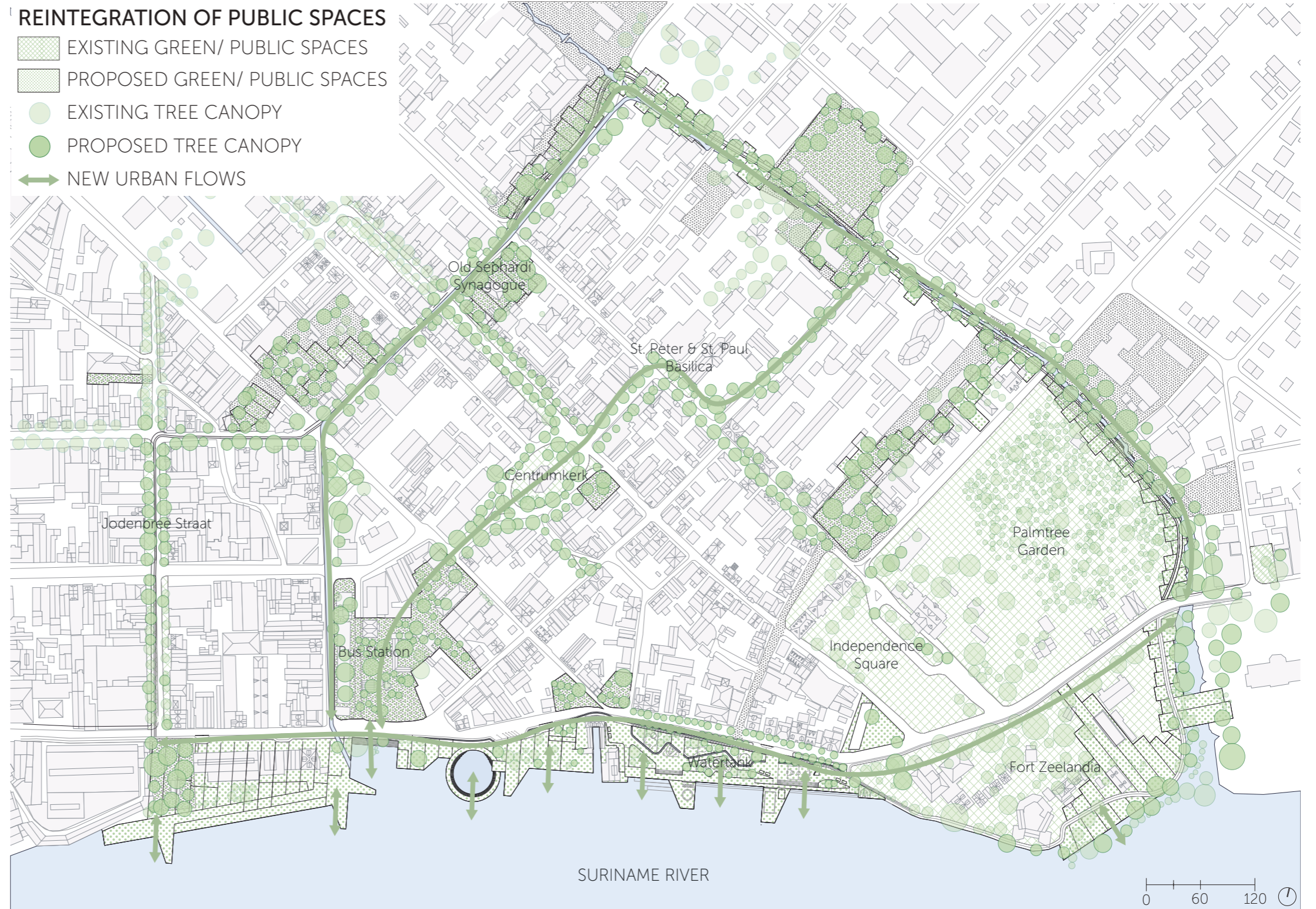
^{1,2} Source: *Geografia Urbana*, cartographic restitution based on information from UNESCO.



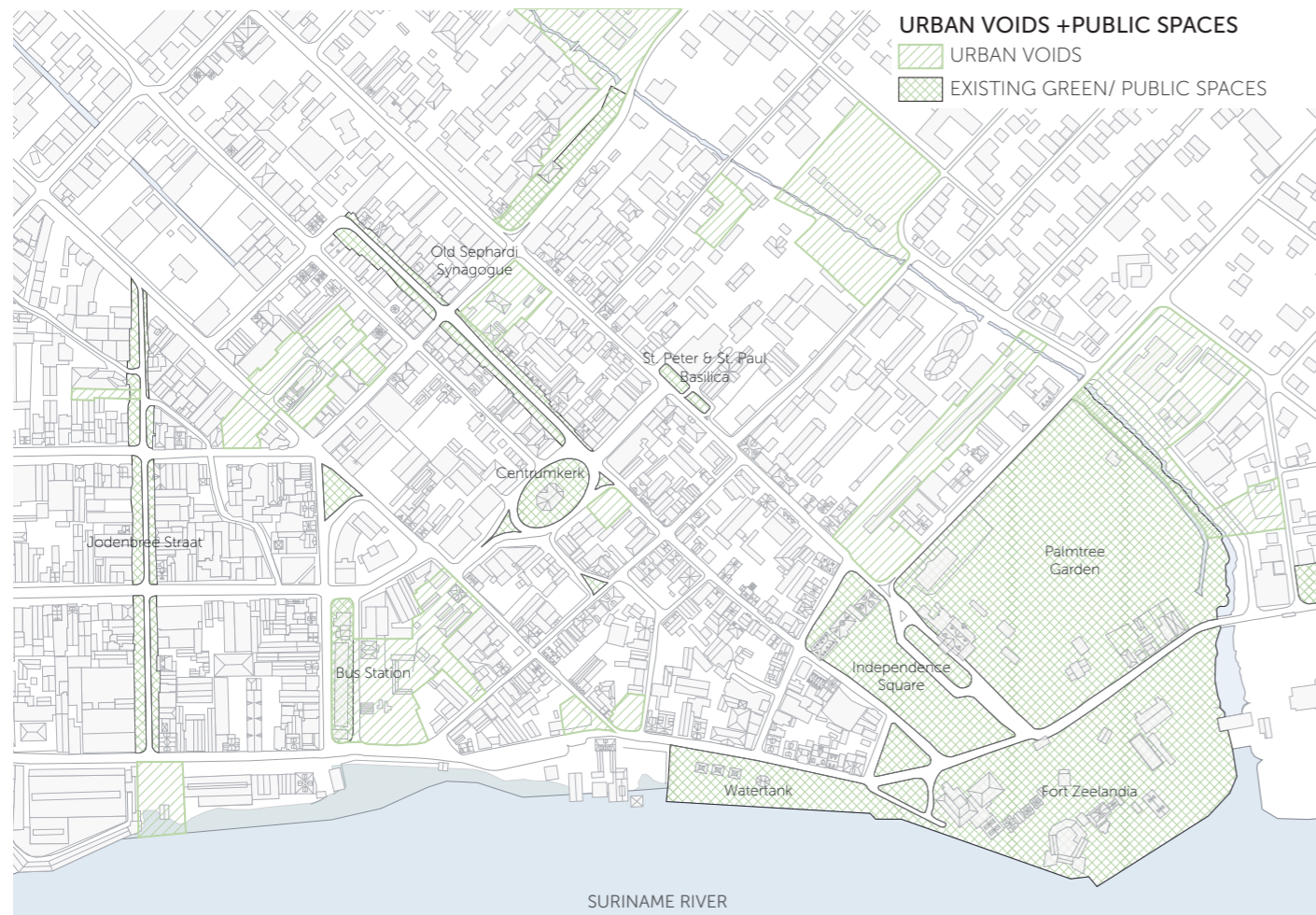
View of conservation buildings Landscape network and conservation strategy

The urban layout, green areas and buildings currently under UNESCO's World Heritage List are in a diverse range of conditions. We propose a design strategy that protects, articulates, revitalizes and recognizes the historic center and its architecture through a landscape intervention that links these areas through new public spaces. This can work as an incentive for owners to rehabilitate their own properties.

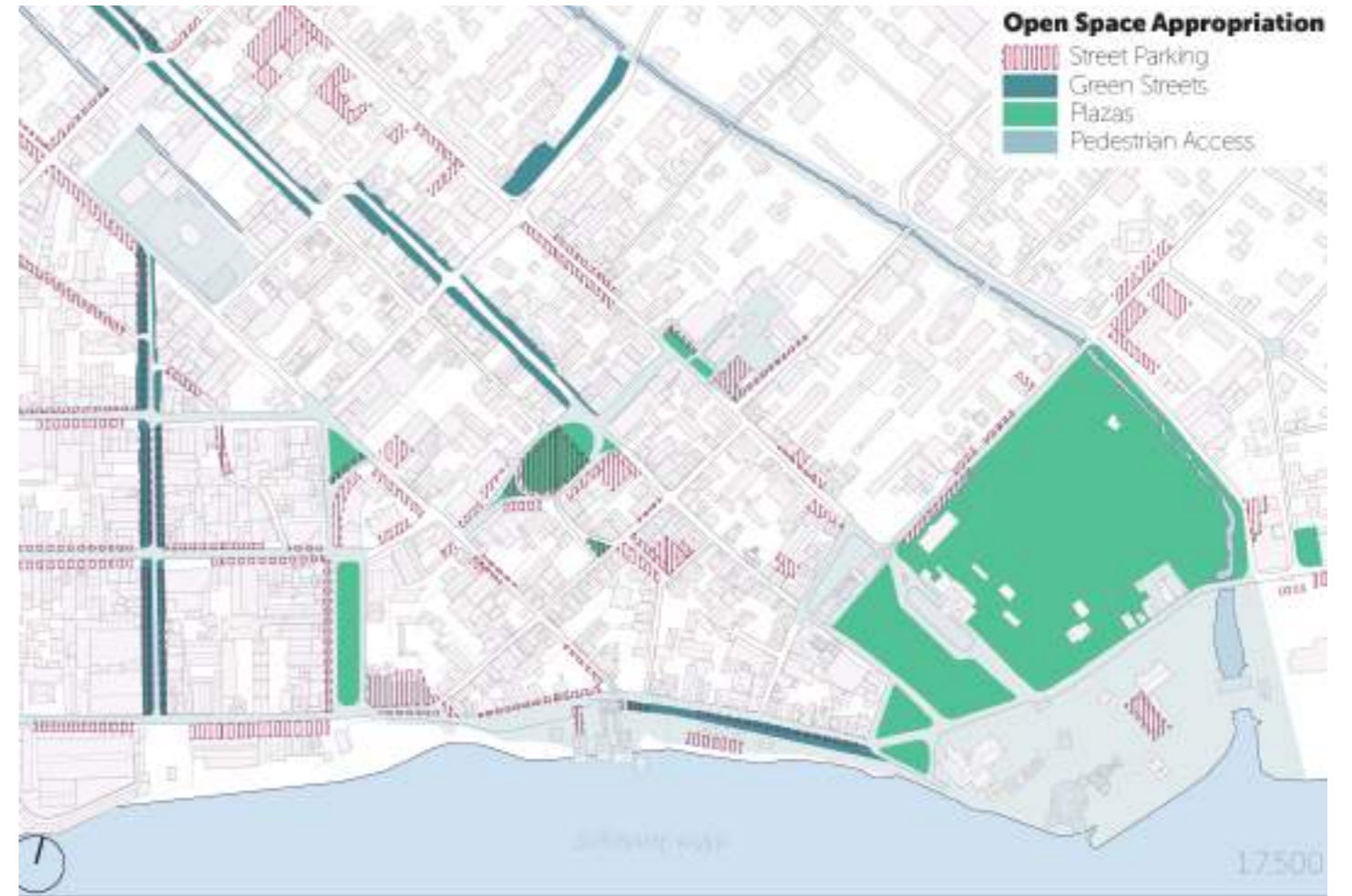
3. Fragmentation and unbalanced quality of its public spaces



Public Space network proposal



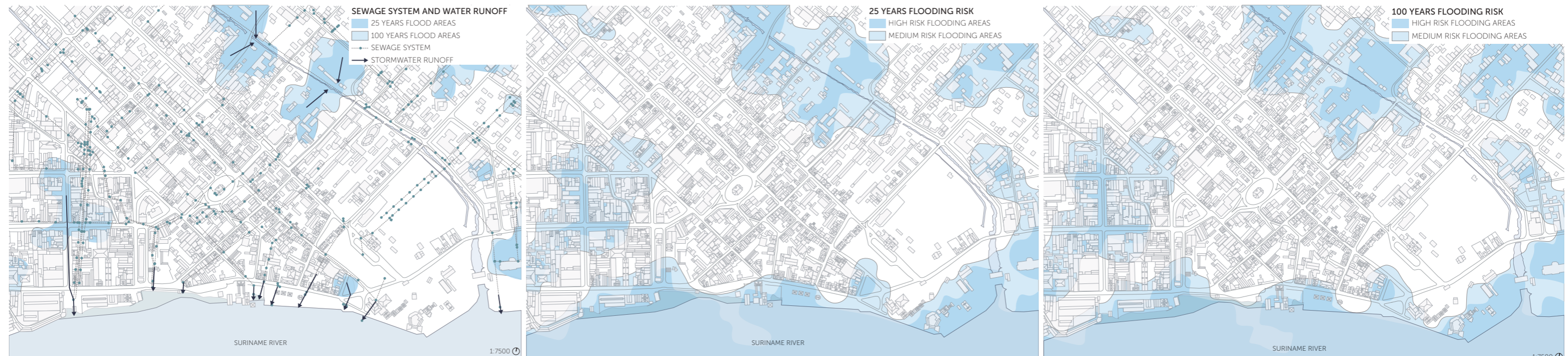
1. Urban voids + Public spaces



2. Open Public Space Characterization

There is a strong fragmentation of the center's public spaces and a striking unbalance between the eastern and western areas. In the eastern area, where most government buildings are located, green spaces predominate. On the western side, there is a lack of green areas; public spaces are visibly deteriorated due to the traffic impact of the market and other commercial activities. The creation of a green network that strengthens the public spaces on the western area is part of the strategy to articulate the center's landmarks.

4. Creation of sustainable water management strategies



Flood risk, from now to 100 years

Located in a low level area, the center faces high sea level rise risks (it is expected that in the course of this century the sea level will rise around 1 meter) but also flood risks due to urban stormwater runoff.

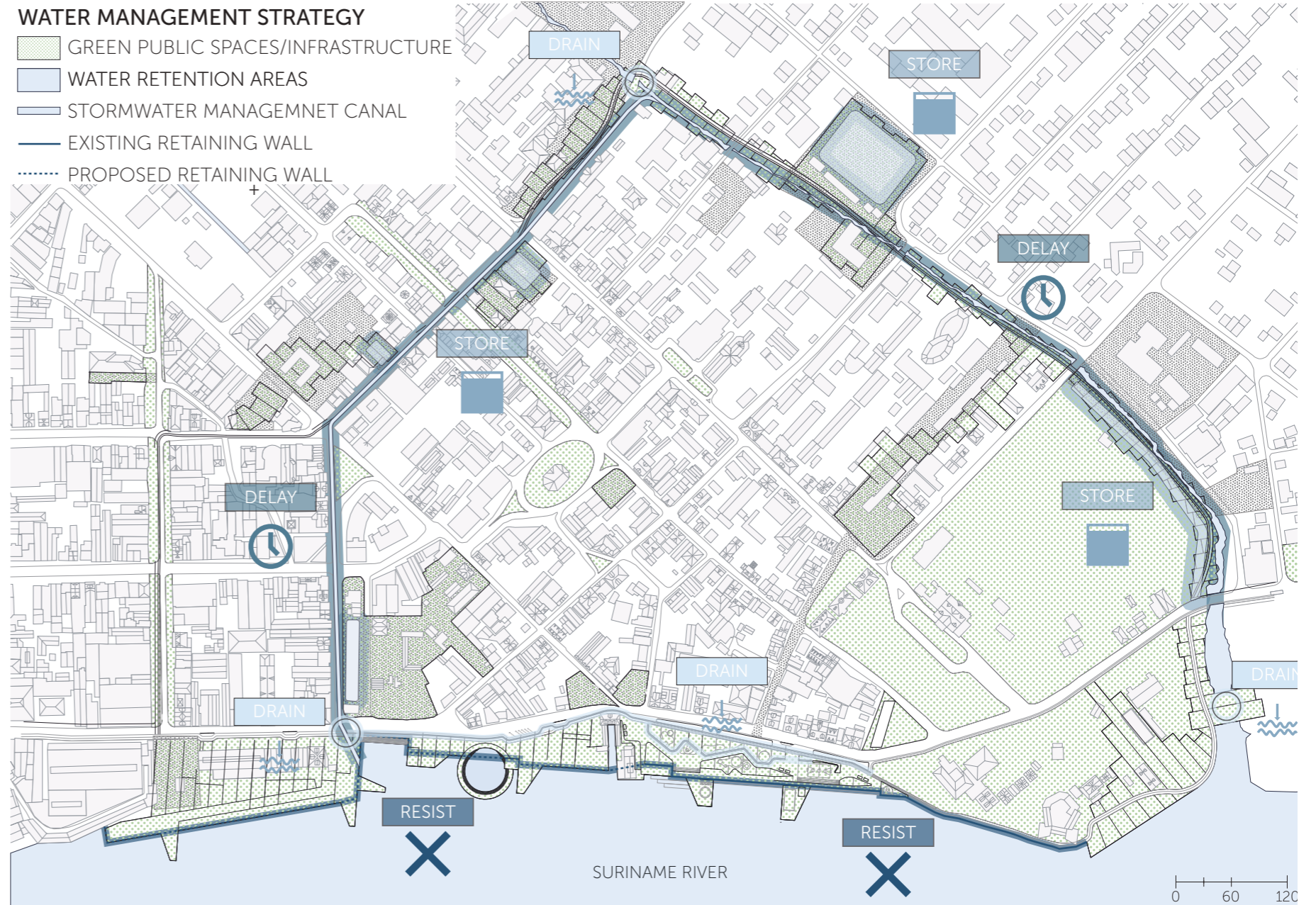
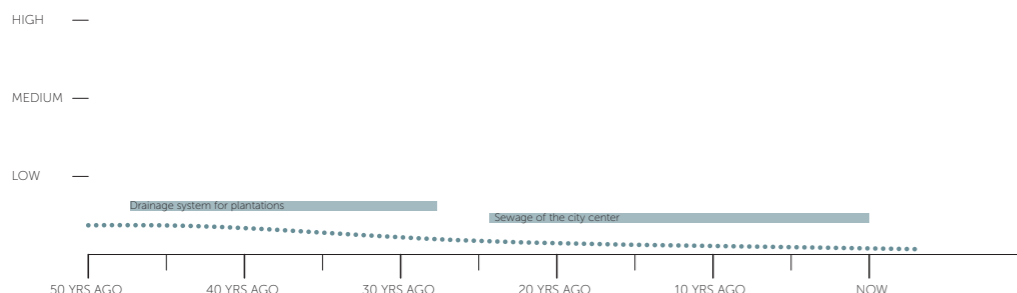
The provision of integrated design strategies that address both the creation of remarkable public spaces and sustainable water management strategies are key elements at stake in any plan of revitalization of the city center.

¹ Source: The Consultant, based on data from MLTDE.

Sustainable water management strategy

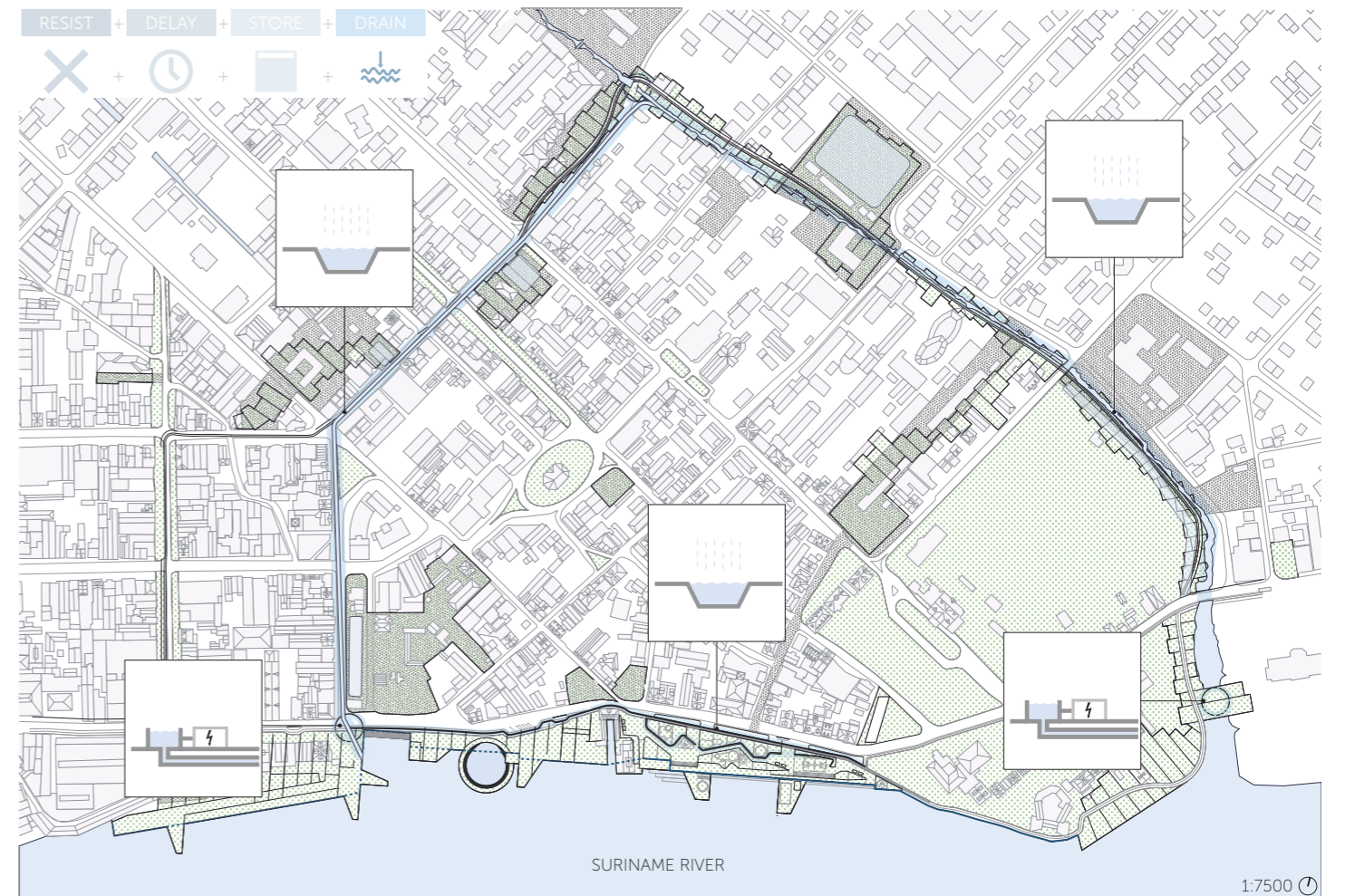


COMMUNITY USE OF THE WATER CANALS



Located in a low level area, the center faces high sea level rise risks (it is expected that in the course of this century the sea level will rise around 1 meter) but also flood risks due to urban stormwater runoff. It is therefore necessary that any strategy of urban revitalization includes mitigation and adaptation strategies for climate change. The provision of integrated design strategies that address both the creation of remarkable public spaces and sustainable water management strategies are key elements at stake in any plan of revitalization of the city center.

Water management proposals



1.4. Recognition of the waterfront intervention area


Stage 1: Waterfront Intervention Area design strategy: Re-articulate the city with the Suriname River.



The highlight from stage (1) were the fact that the waterfront would synthesize the main strategies at stake in order to bring back activities to the city center: the creation of multifunctional programs and public spaces that attract a diversity of users on an everyday basis. The waterfront will become Paramaribo's new and most visible park—one that can be built in different phases through a modular strategy. These Five main areas of activity have been identified through analysis:

1. Central Market
2. Bus Station
3. De Waag
4. Waterkant
5. Fort Zeelandia.

Waterfront design concept without the extension of pier structures

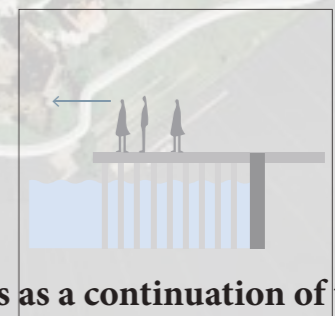
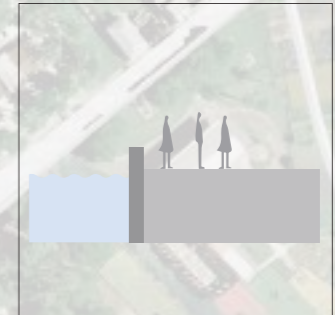


Urban Landmark:

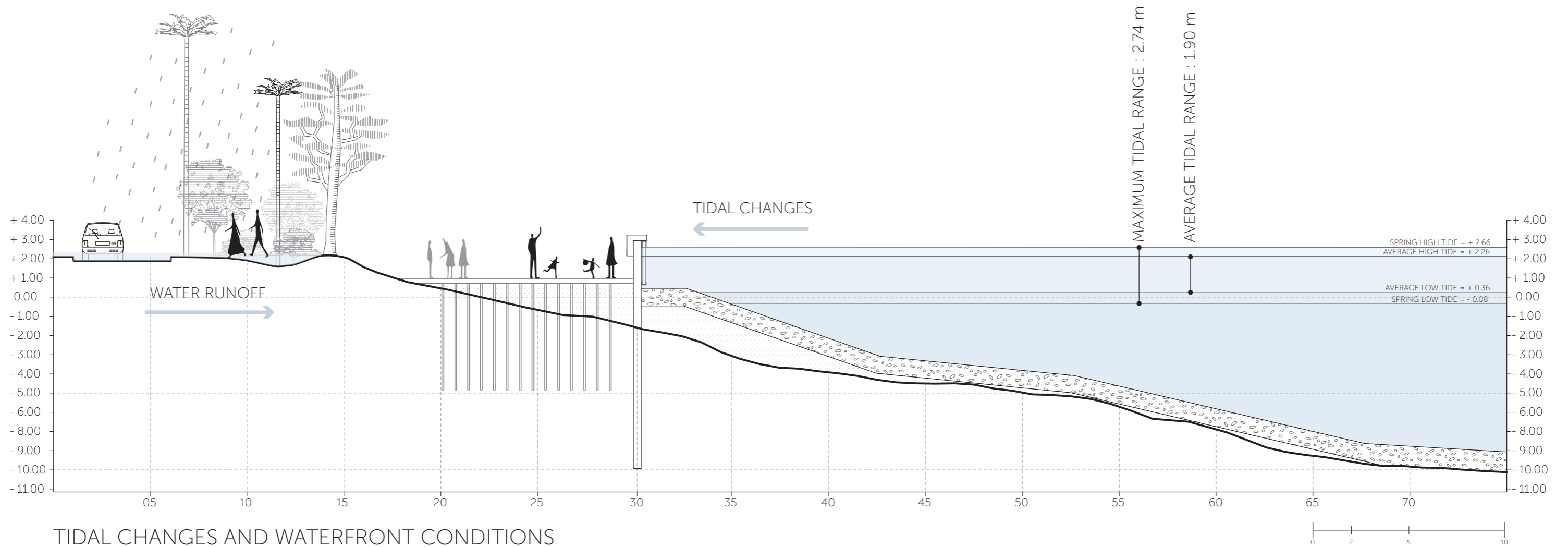
An emblematic and recognizable public space that expresses the importance of the river in the everyday life of the city. The piers, extending and integrating the river into the public space of the waterfront play a key role in the re-appropriation of the riverfront.

An urban landmark is the convergence point and key area of encounter for citizens and tourists. It is the area from which new imaginaries and perceptions of the city will emerge.

Waterfront design concept with piers as urban landmarks

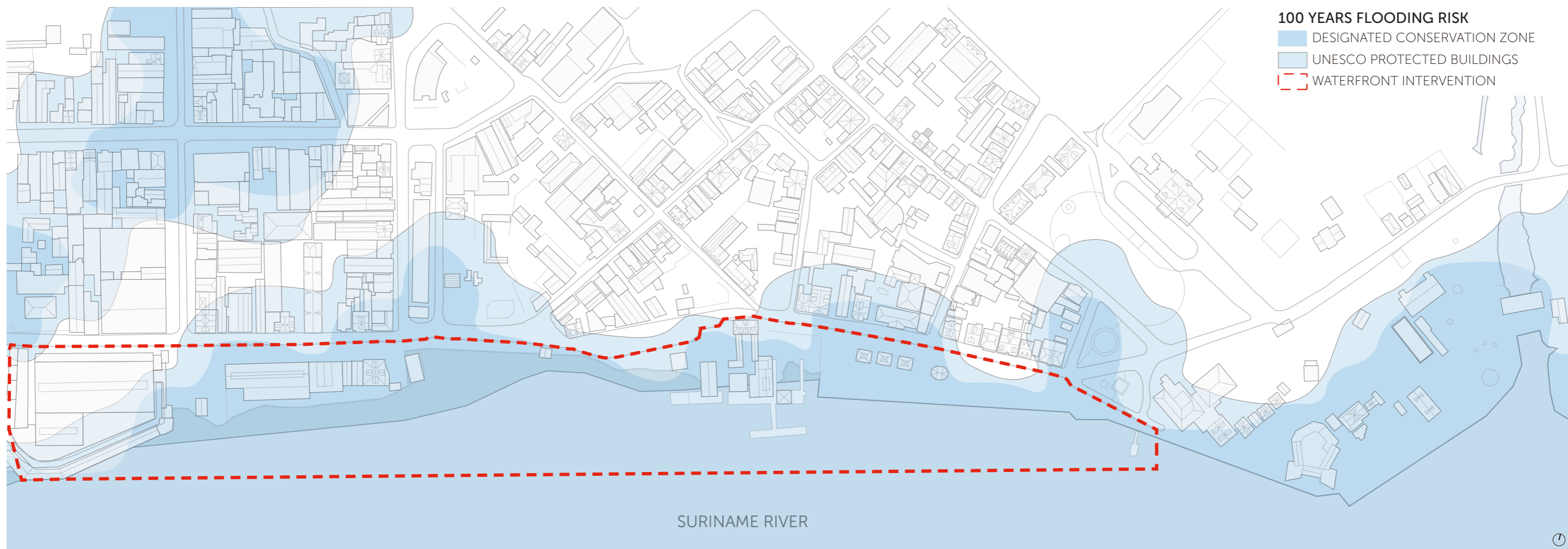
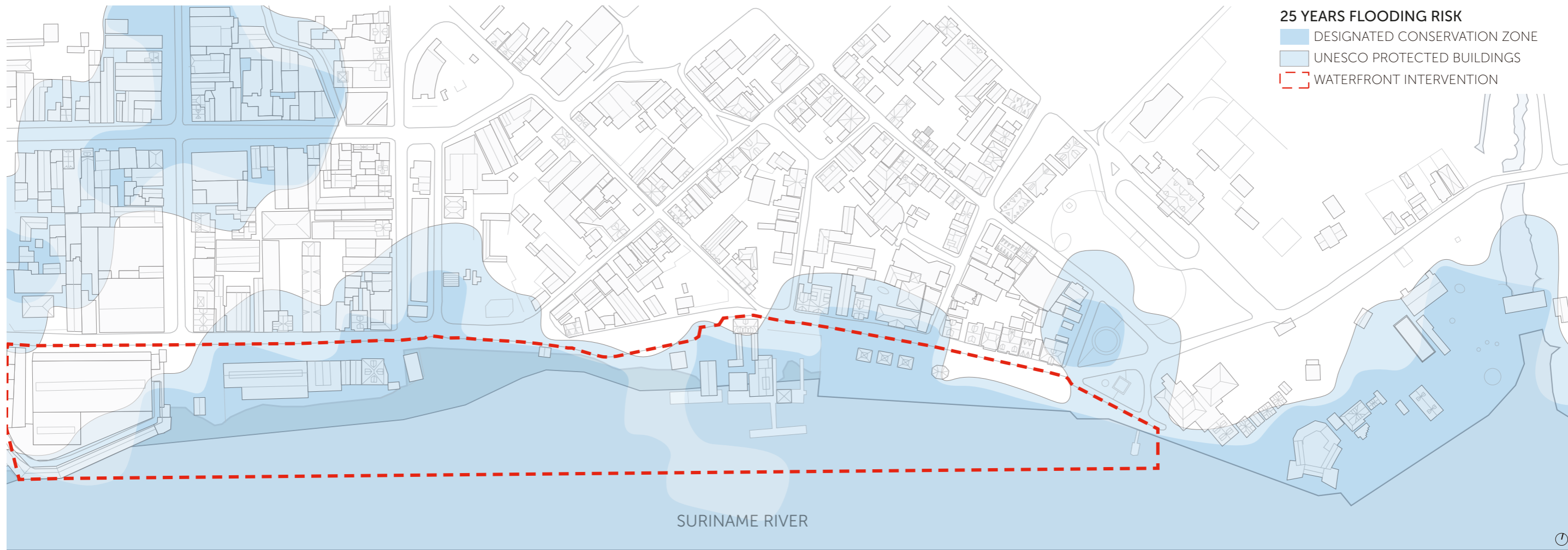


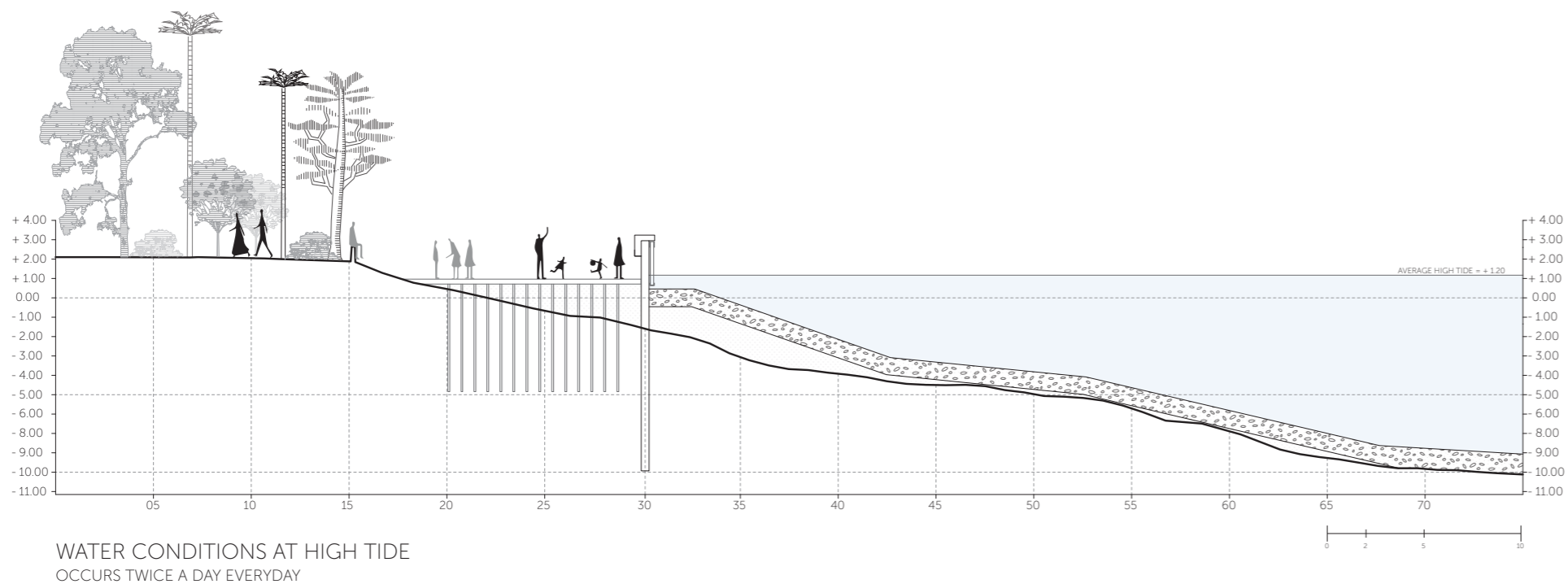
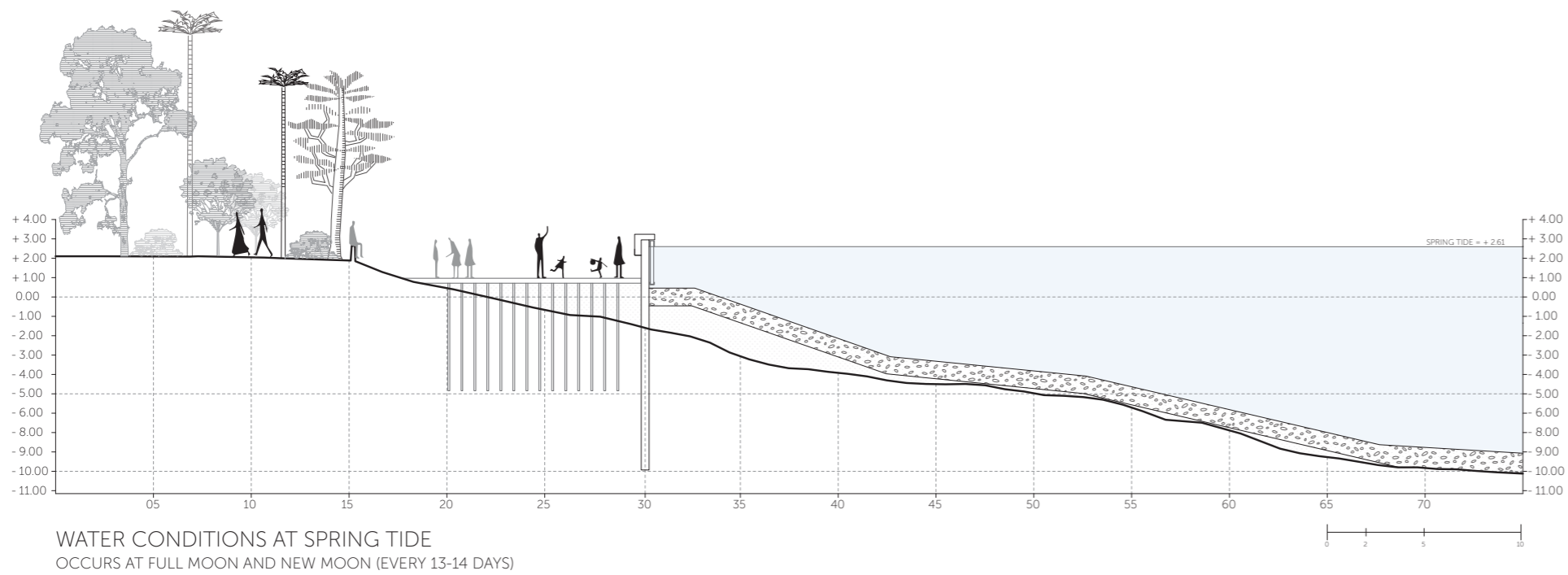
Piers as a continuation of the city into the river



The waterfront is an exceptional asset of the historic city and it is therefore essential to provide design alternatives to the purely engineered response of the concrete retaining wall as a measure of risk reduction.

These alternatives should be able to pair strategies of public space revitalization and strategies of mitigation and adaptation to climate change.

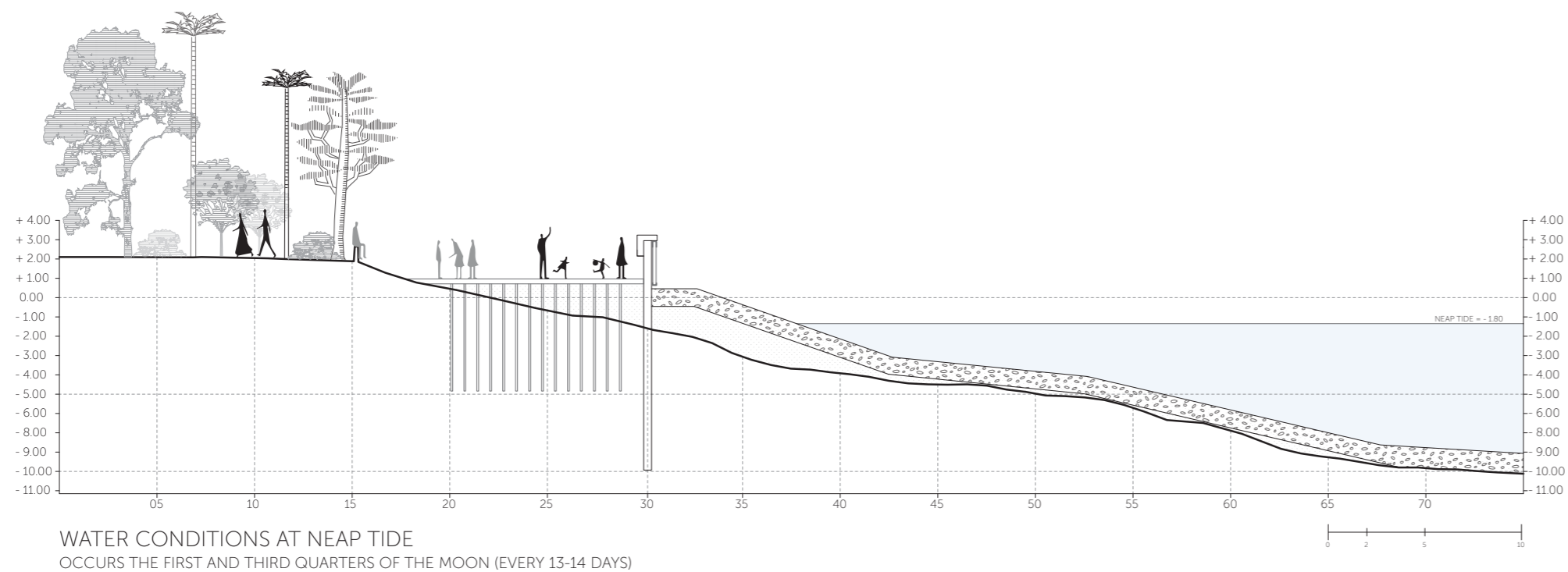
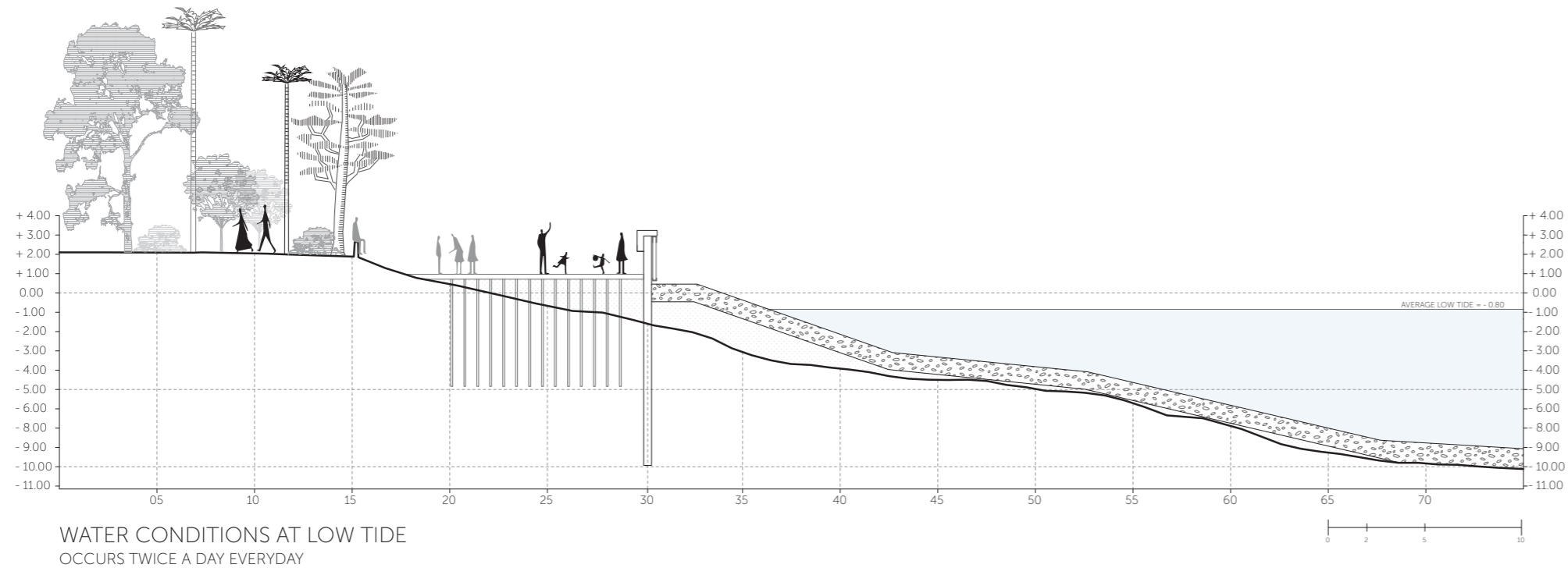




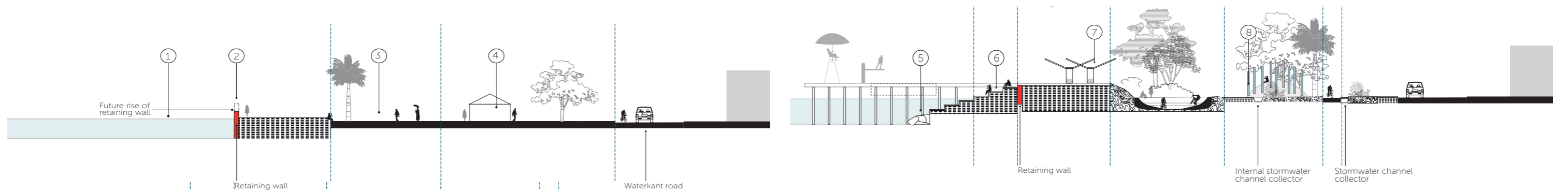
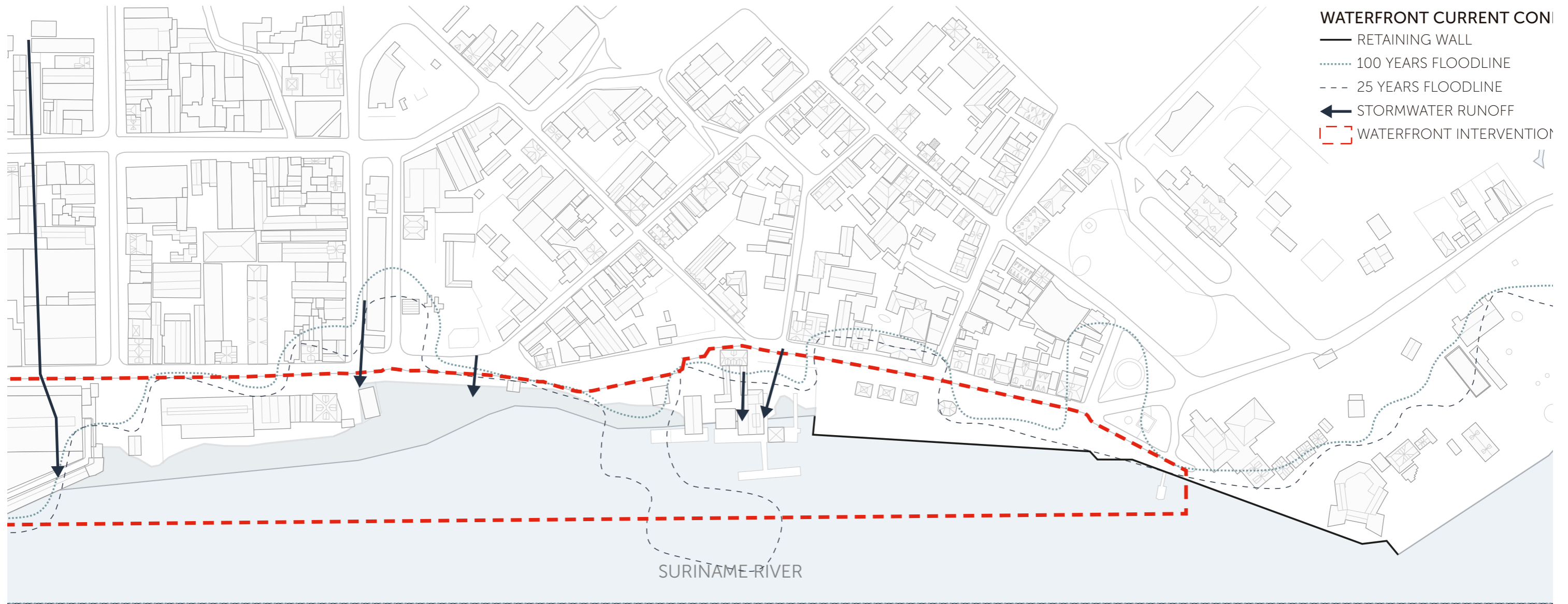
A sustainable waterfront revitalization:

2. Bus Station
3. De Waag
4. Waterkant
5. Fort Zeelandia.
6. Commewijne Port

Each phase is connected to the next through shadowed cycling and running paths that are part of the green transition belt, and will eventually cover the whole length from Fort Zeelandia to the Central Market. While these nodes have a central activity, the juxtaposition of other uses will provoke the emergence of diverse economic and leisure activities around the area.



The waterfront area requires a study of the further extension of the retaining wall up to the Central Market or other alternatives that resist future sea elevation levels to guarantee a more direct relation between the city and the river. Parallel to this project to protect the inner city from floods and erosion it is strategic to revitalize the public space of the waterfront. The embankment between De Waag and Fort Zeelandia is an ideal testbed to provide Paramaribo with a sustainable and lively new public space that re-connects the metropolitan area with the city center. The second two sections demonstrates a new possible approach of how to attack the integration of the wall together public space.



2.

Stage 2: Participatory design process

Designing and implementing participatory design instruments to achieve consensus among the stakeholders over the area of intervention.



The Results from the first stage and the conceptualization of the public spaces in the intervention area are summarized in the previous chapter “Recognition of the waterfront intervention area”. Up next we will explain the development of the Waterfront Master Plan based on a participatory approach.

The aim is help to build consensus over the proposal, and to focused on the main debate points including:

- i) Architectural treatment of the public space
- ii) Integration of alternatives for the mobility plan (cycling paths, sidewalks, pedestrian walkways etc.)
- iii) Urban and commercial equipment required for the incorporation of recreative and commercial activities.
- iv) Urban furnishing considerations.

2.1. Participatory design process and methodology



INSTRUMENT 1: WORKSHOPS

Building knowledge and a network of actors.

The degree of participation may vary. From being informed of the development of a project to sharing roles and responsibilities in decision-making. While there may be times when information is a necessary part of the process, we believe that real impact is often achieved when we intentionally build a person's ability to contribute to higher levels.

Components:

- A) *Collection of qualitative data. (Interviews, surveys, observations)*
- B) *Active participation in imagery creation (Group sessions, cooperative data analysis, social cartography)*
- C) *Feedback and evaluation of proposals (Group sessions, surveys)*

INSTRUMENT 2: LIVING LABS

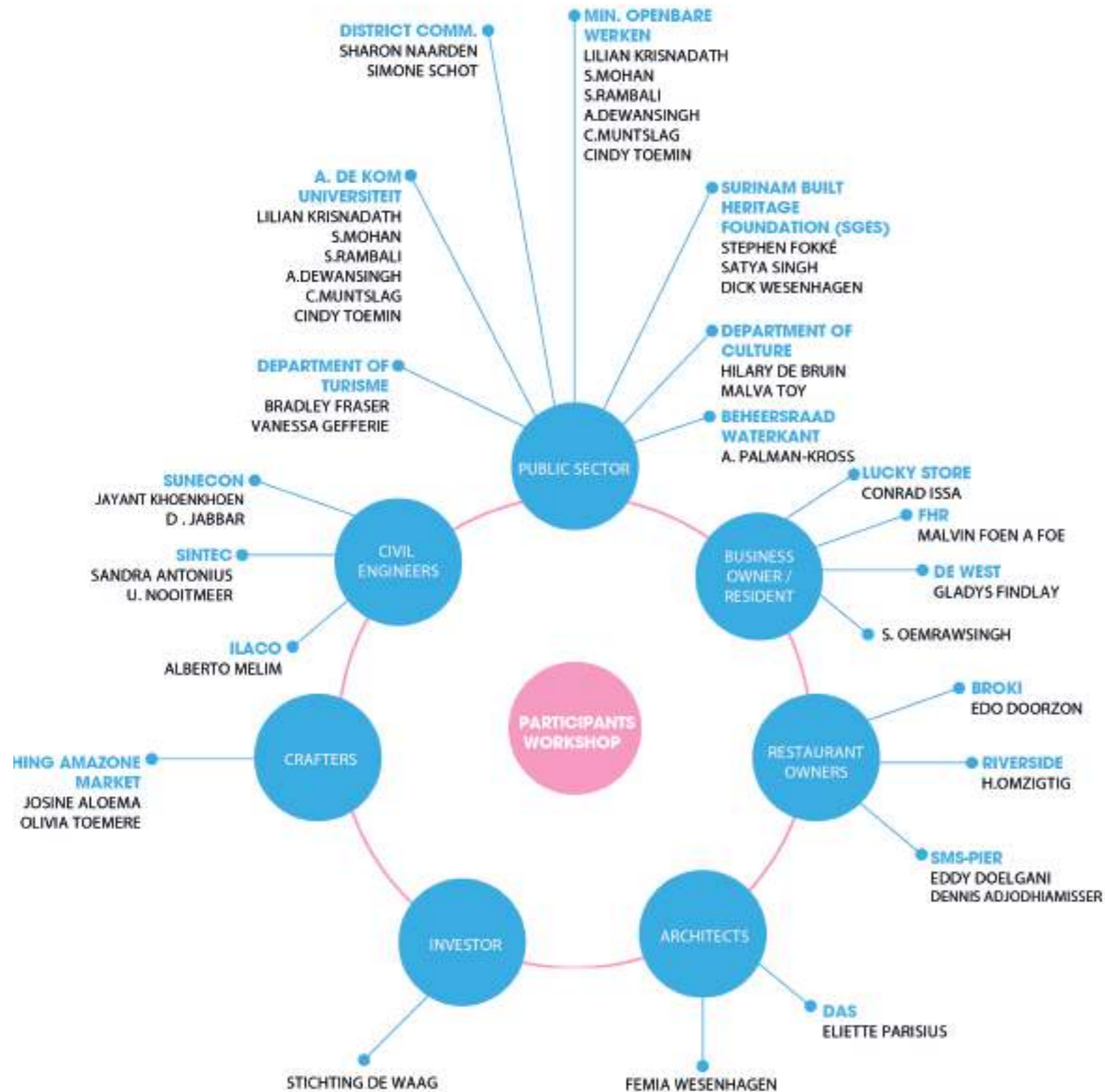
Establishing relationships with the project.

As a general idea and practical approach to improving a neighbourhood, a city or a region, we propose a system of "Place-making" or collective construction of spatial elements or activities that inspire people to re-imagine collectively and re-invent public spaces as cores of each community. By strengthening the connection between people and projects, this collective construction refers to a process of collaboration through which we can shape the scope of the public in order to maximize shared value of a design.

Components:

- A) *Definition of problems and possibilities in the intervention area*
- B) *Identification of a place of significant intervention for the community.*
- C) *Respond to problems with a specific strategy, activity or use*
- D) *Generate imaginaries and collective ideas*
- E) *Community construction of the element or activity*
- F) *Inauguration event and recognition to the actors involved*

2.1.1. Workshop no.1



The objective was to develop a series of workshops focused on evaluating the design tools proposed on the “Comprehensive design strategies for a sustainable and lively waterfront” document, that allow the different stakeholders to have a voice and actively participate on the design process.

INSTRUMENT 1: Paramaribo Workshops

The workshops were structured thinking on understanding Paramaribo’s waterfront Past, Present and Future.

The workshops were developed within 3 different approaches that are interconnected:

1. Individual Workshops:

Visions and missions of the city center and the river - individual workshops

2. Group Workshops:

Co-designing the water tank - Group workshop

3. Fieldwork: Interviewing the citizens.



In total 40 people from different institutions, public and private sector participated during the three days of workshops. One of the great outcomes of implementing this kind of participatory design is to be able to foster citizen engagement, community participation and deliberation, institutional alliances (public and private) and understanding of a context from its tangible and intangible virtues.



THE WATERFRONT IS GOOD, ALTHOUGH I DO NOT GO SO OFTEN ANYMORE...

AS A CHILD I USED TO ENJOY COMING TO THE WATERFRONT, THERE WERE A LOT OF ALMOND TREES.... WE CAME WITH A BLANKET & SAT DOWN TO EAT SMTH...



...BUT IT IS NOT LIKE THAT ANYMORE... AWAY WITH THE BUSES, MAKE IT NICE & SAFE SO I CAN COME WITH MY GRANDCHILDREN TO THE WATERKANT.

THE FUTURE WATERFRONT SHOULD KEEP ITS HISTORICAL VALUES AND BE CLOSED TO MOTORIZED VEHICLES...



IT USED TO BE GREAT, NOW IT IS A MESS...



THEY MADE SOME SMALL IMPROVEMENTS BUT STILL YOU CAN NOT SIT SAFELY OVER THERE...



THEY SHOULD START WITH THE MARKET HALL... THEN WHERE THE TAXI BOATS ARE...





- Identified and commented key areas within the waterfront intervention area
- Keywords

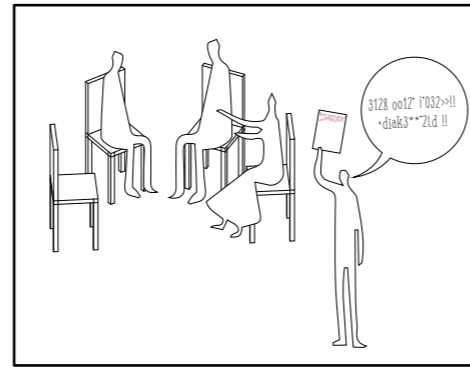
- Focus topics
- Design tools based on the results from workshop within the categories Connectivity, Environment, Economic aspects, Public space and Heritage.

2.2. Living Lab

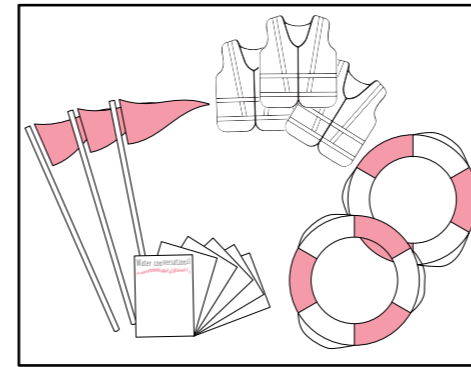


- (ii) to generate place-making activities together with the citizens;
- (iii) work as a communication tool;
- (iv) a way to produce a content that can visualize the progress of the project and show its evolution since its early stage (idea), implementation (construction), in order to finally change the image of the city and use of a public space.

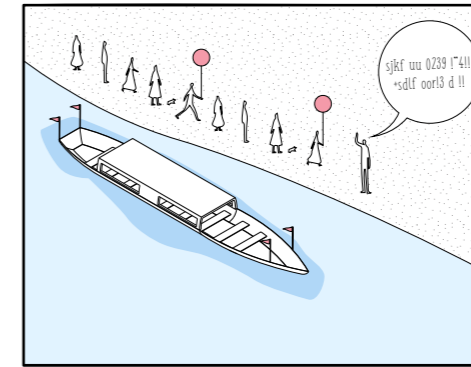
LIVING LAB A. WATER CONVERSATIONS / C. BIKE LANE
KEY MOMENTS DURING THE WORKSHOP



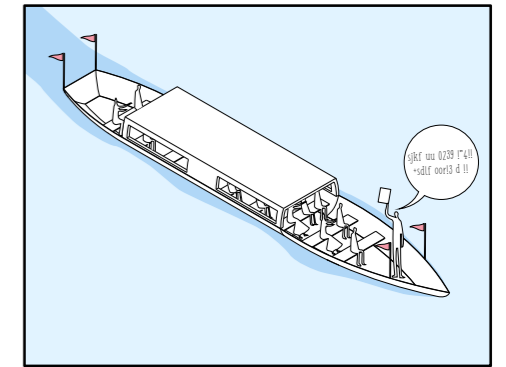
The day before the event, the volunteers that will participate on activity A must practice reading the text, and fully understanding it.



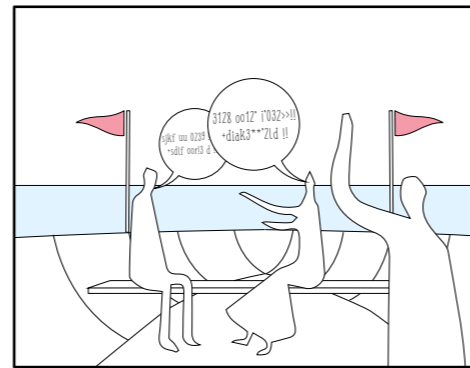
In the morning of the day of the workshop, they will check that every boat has enough life vests, as well as double checking the rest of the materials.



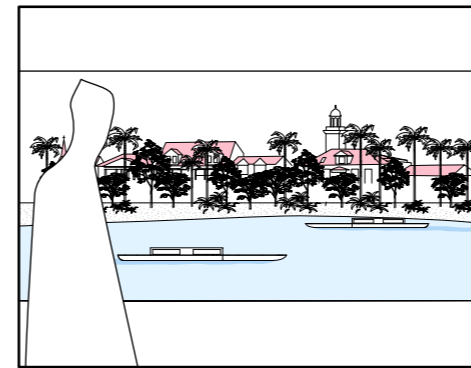
At Platte brug, they will assist people getting in and out of the boats, as well as explaining them what the activity is all about.



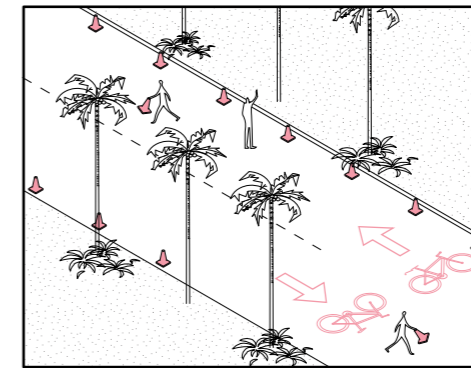
During the trip to Commevijne the volunteers will read the text out loud, making sure that the participant fully understand and embrace it.



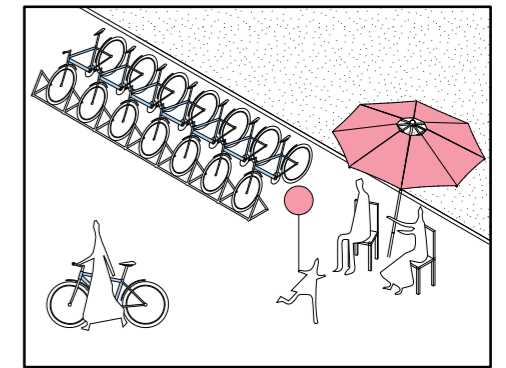
A discussion will emerge after the reading: pictures will be taken, memories and thoughts will be shared, all which constitute the output of this activity.



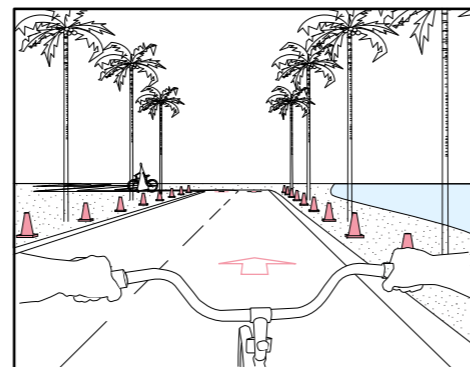
And participant will get the opportunity to rethink the Waterfront, its history and meaning, all while engaging with the Suriname river.



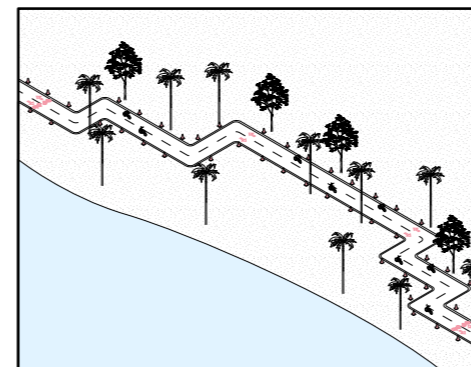
On activity C, the day before the event, the volunteers will help to paint the streets with the stencils and placing the cones to set up the bike lane.



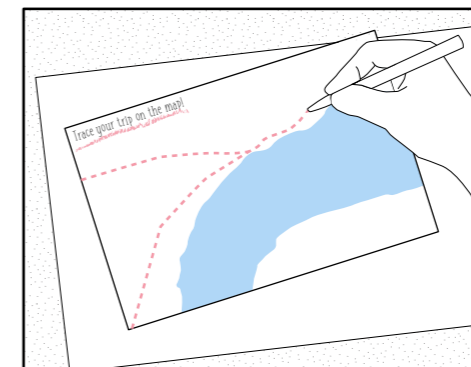
During the event day, two volunteers will help by taking care of the bikes, lending them to the participants, and handing in the evaluation maps.



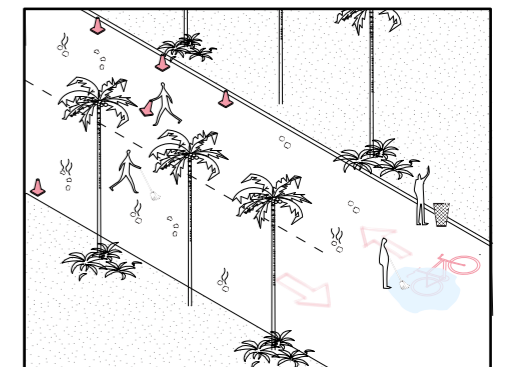
Participants can take the bikes for an hour maximum, and we must encourage them to ride anywhere they want!



The idea is to test a possible bike network, where no longer the cars are dominant, but people walking and biking all around the city.



At the end of the activity (after returning the bikes), participants must complete an evaluation map, where they will trace their tour along the city.

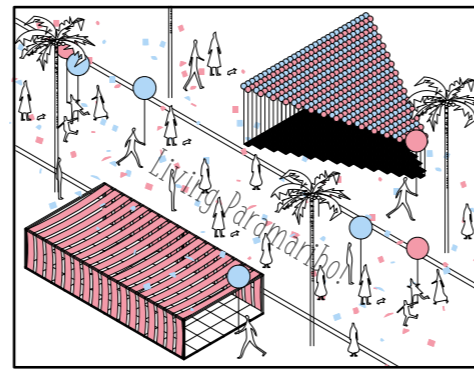


By the end of the event, volunteers will help by cleaning up the streets, collecting the maps, picking up the cones, and returning the bikes to the rental.

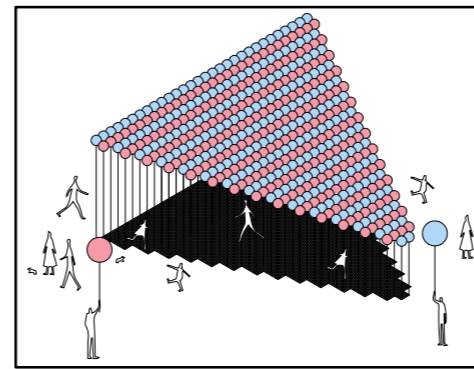
To structure this instrument, was necessary to frame a question that involved the framework of the project in a closer way to the citizens. After the workshops in Paramaribo, the public's approach was to generate a narrative where the main focus was to understand: What is the past, present and future of the waterfront from the citizen's perspective?

To define and develop a shared vision about this question there was contacted the writer and expert in history and literature of Suriname, Cynthia Macleod. Based on the importance of the waterfront and how the city centers urban elements where defined by the Surinam River itself, Cynthia wrote a historic piece that was the guideline to conceptualize structure the living lab in a closer way to the cities history and citizens way of living and understanding the area of intervention.

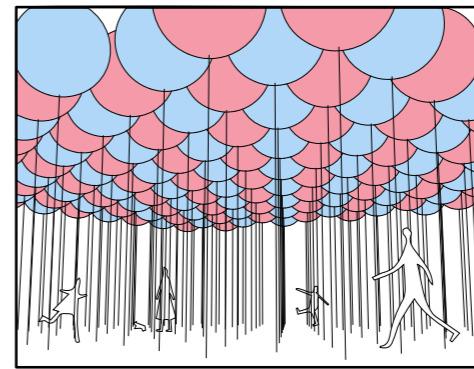
LIVING LAB D. TESTBED HUB
KEY MOMENTS DURING THE WORKSHOP



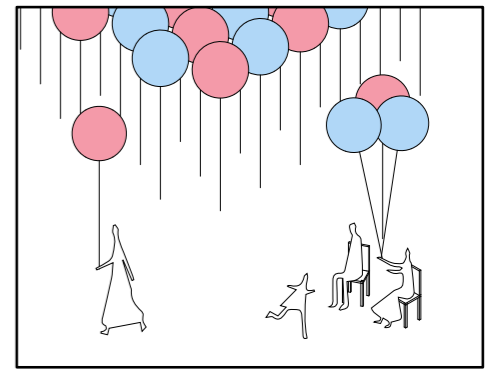
The streets that used to be reserved for the cars will become a **party** for the day, people claiming their space and actively using the waterfront.



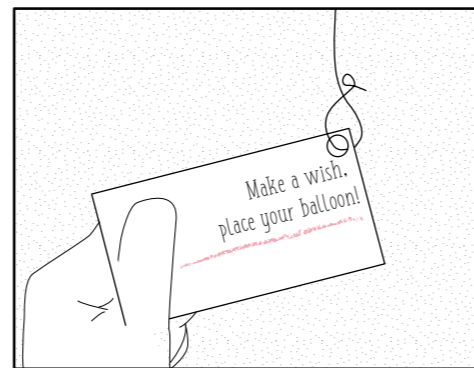
The **balloon canopy** will be setup early in the morning, and will be, along with the view tower, one of the most recognizable elements of the workshop.



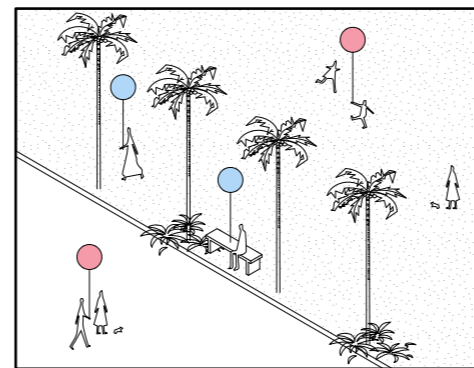
The canopy is designed to invite people to **engage** with it: pass through it, play with it, take pictures underneath it.



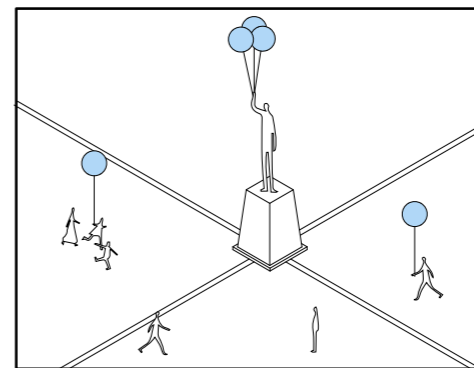
During the day there will be two volunteers pumping the balloons, and handing one of them to each participant.



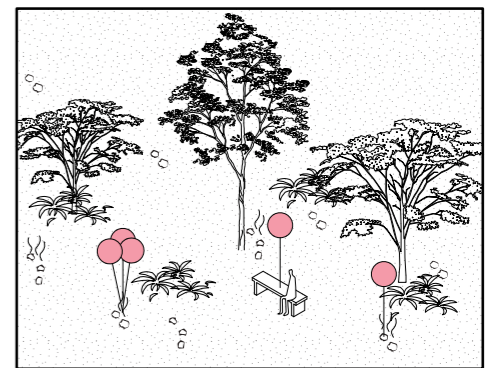
Each balloon has a **card** attached: it will ask the participants to take their balloon to a place they would like to change or preserve, and write why.



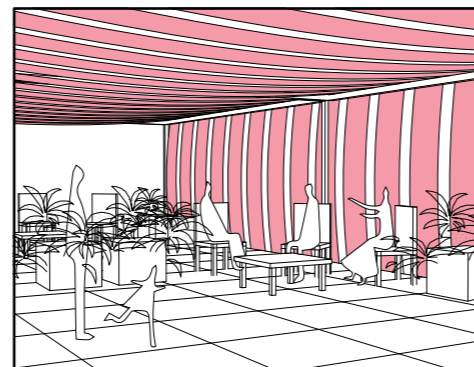
Participants can take them anywhere, the idea being to **make visible** what people think of their city, and identify the most important places



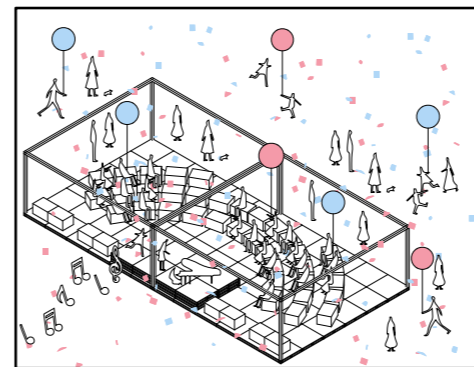
Blue balloons will be taken to places that should be preserved: spots of collective memory, public spaces that have been successfully appropriated, etc...



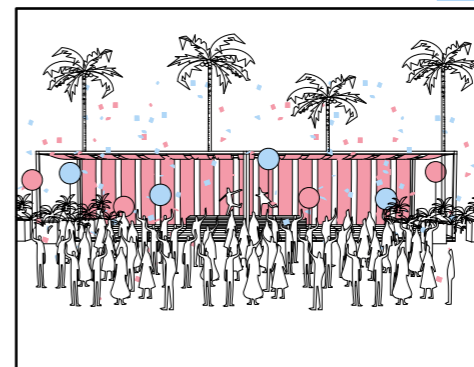
Pink balloons will be taken to places that need a change: spots dirty with trash, or places that have been abandoned by the city, etc...



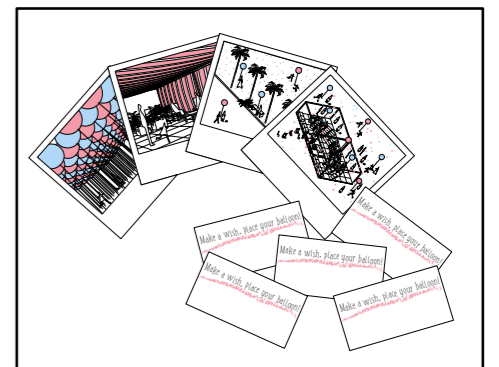
Meanwhile, the hub will allow people to have a glimpse of a **quality public space**, by the shade and the breeze, where they can relax next to the river.



Different kinds of **spectacles** can happen during the day. We encourage different performers to take the stage and surprise the participants!



By the end of the day, a band can turn the evening on, and the tent can become a **center for activity** and involvement with the rest of the city.



The cards, pictures, videos and audio will serve as valuable **qualitative data** for the next step of the design.

THE WATERFRONT OF PARAMARIBO

CYNTHIA MC LEOD

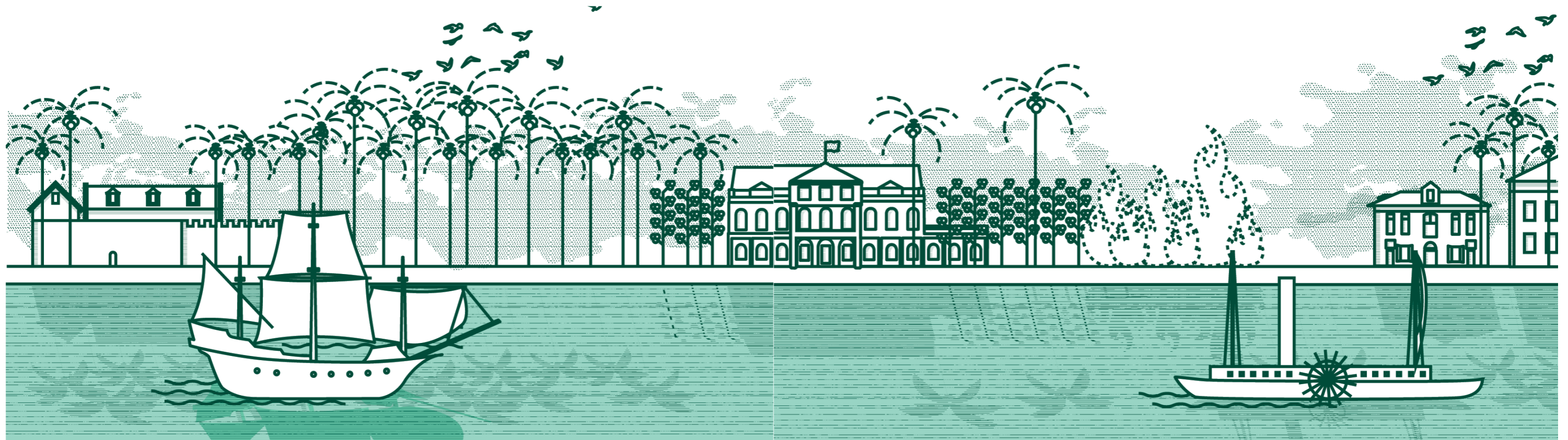
Suriname, the middle part of Guyana, that got its name from the authentic inhabitants of South America because of the many rivers in this area. Guyana is this part of the continent between the Amazon and the Orinoco river; “Guyana” means riverland, in one of the old Indian languages, because of the many large rivers in this area. Suriname, is bordered by the Marowijne river in the east and **the Corantijn river in the west. The Suriname river, which gave the country its name, is in the middle.** All the rivers start somewhere in the southern part of Suriname and they stream to the north via an extended river mouth into the Atlantic Ocean. Coming land inwards, the country’s capital, Paramaribo, lies at the right hand side, some 10 kilometers from the coast.

In the nineteenth century, the view on the ‘Waterfront’(Waterkant), the oldest street, gave the city of Paramaribo the fame to be one of the nicest cities of the Caribbean. One can fully understand why. Coming from the ocean on a ship, the visitor would first see some plantations at the riverside, than the big fortress Zeelandia and after the bend in the river, the passengers had a view on the large green square with the beautiful white governor’s palace in the background; in sequence the boat would slowly sail along the Waterfront with all the colonial mansions. The first impression must have been magnificent!

In the old days the Waterfront was full of activities for the Suriname river. It was the artery of the colony, because foreigners as well as inhabitants of the many plantations had to enter the city via the river and the Waterfront.

The first colonists came along this river and took possession of the area, they started their plantations along this river and gradually along the other rivers as well. For almost three centuries ships loaded with enslaved Africans who were sold in an auction to work on the plantations, entered the country via this river, while ships loaded with colonial products like sugar, coffee, cocoa, cotton, tobacco etc. left the country.

On the roadstead of Paramaribo, which outreached from Fort Zeelandia till the Central Market, ships from Europe and North America lined up, waiting their turn to load their cargo which was weighed or administered in the Waaggebouw, which still stands there at the riverside. This is the second building of the Waaggebouw, because the first one was destroyed in Suriname greatest fire disaster in January 1821. The fire, which lasted 22 hours, started in the yard of the Cornerhouse (the house on the corner of the Waterkant with the independent square) and destroyed everything at the Waterfront , and at the other end going through the Heerenstraat till the



Kerkplein and everything in between till the Heiligenweg. Four hundred houses became a prey to the flames.

The owners of these buildings belonged to the wealthiest of Suriname; they had their houses rebuilt and the young architect, Johan Voigt, who designed most of the houses, designed the first mansion with a balcony carried by round columns, like he had seen in Louisiana in America. This is how balconies became fashionable in Paramaribo and this gave the Waterfront its view of today, what was and is so much appreciated. The Waaggebouw, vital for Suriname's export, was the first building to be rebuilt. It was for a long time the only building, really lying along the waterside. Nowadays it is not needed anymore for administration of exportable goods and was turned into a restaurant, with a pier above the water.

Indeed, the very first view of the beginning of the Waterfront in early colonial times was different than it is now, more commercial and crowded. Although we have no pictures or drawings we assume that before the fire destroyed the first part of the Waterfront, was the busiest part of the city. There were mansions, storehouses and stores. In rebuilding after the fire of 1821, it seems that the first part became the area for the wealthy and notables with the magnificent houses facing the river. That part of the Waterfront was and is a real boulevard where one can walk leisurely and enjoy; see and be seen.

The second part was the more commercial part, a little further than the Waaggebouw, was the "Platte Brug" where small plantation boats could moor, no matter what tide it was. Next was the ferry dock; with a ferry going every hour, people could cross the river and go to the eastern part of the country. Next to the ferry dock, was the real harbour, the extended, first KWIM, later KNSM, jetty where the big passenger ships and freight ships from Europe moored. The view was how a harbour should be, with

cranes moving most of the time, crowded with people and off course much noise. In this part, the buildings facing the river were storehouses and stores. In the first half of the 20th century, the gold field train taking the many gold diggers to the gold fields moved three times a week slowly and a lot of noise through the pedestrians, donkey carts and few cars. It was really the most crowded part of Paramaribo and there were constantly traffic jams. That and people's safety were some of the reasons why in the sixties of the former century, the government moved the harbour and the dock to further up the river, past the center of the city.

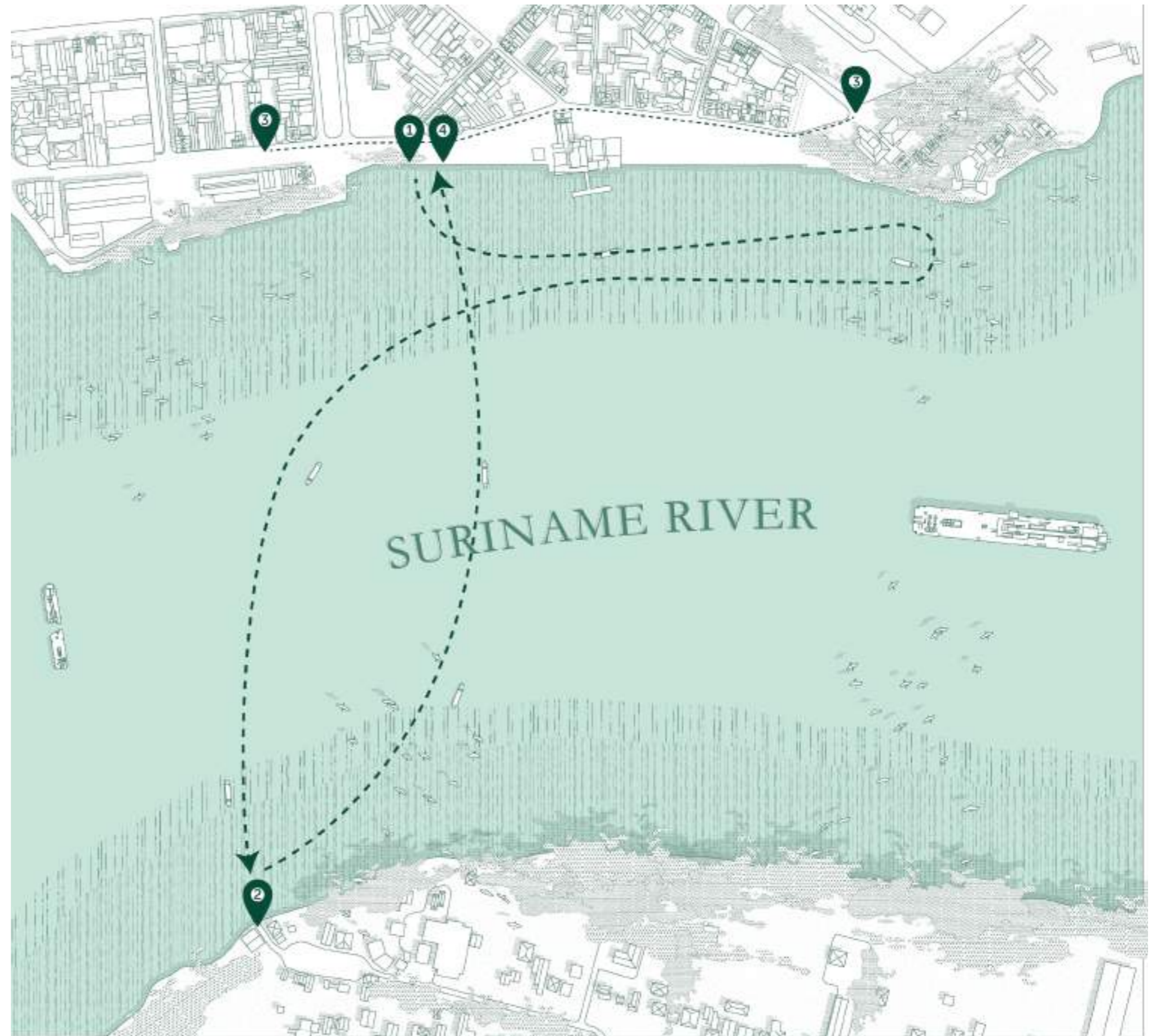
The third part of the Waterfront is dominated by the Central Market which came there in the beginning of the 20th century, so that plantation products could be negotiated not for export, but for the population of Paramaribo. Visiting the Central Market today a tourist can really experience the multicultural, multilingual, multi-religious essence of Suriname. This part is now constantly overcrowded and traffic jams are a daily problem.

Things have changed during times. Visitors do not come on a ship, they come by airplane; the ferry doesn't exist anymore, because since the year 2000 the Wijdenbosch bridge crosses the Suriname river and the KNSM dock, where the big ships moored, is completely gone. The Central Market doesn't need to be at the Waterfront or at a riverside, because no products arrive by boats, everything is transported by trucks and pickups. Paramaribo has extended tremendously after the second World War. All the neighbourhoods have their own market place and the population doesn't frequent the Central Market as they used to. In fact, the Central Market has become more the trade place for wholesale and it would be better for them and also for safety reasons if the Central Market could move to another place with more parking facilities for cars and trucks.



Map of activities during the Living Lab event

- 📍 Activity no. 1: Water conversations
- 📍 Activity no. 2: Another point of view
- 📍 Activity no. 3: Bike lane
- 📍 Activity no. 4: Testbed hub



Activity no. 1: Water Conversations

Trigger storytelling as a tactic to collect data



Activities and Aim:

(I) Highlight the waterfront and its change

By sharing the historical text written by Cynthia McLeod with the participants, we expect to trigger a discussion upon the past of the city and people's shared memories.

(II) Open up a space for dialogue

The boats will serve as catalyzers for the discussion, reinforcing the potential of place-making activities to connect participants with their surroundings.

(III) Discover common imaginaries

We want to use these stories and dialogs as qualitative data to get a sense of the historical meaning of the intervention site.



Parameters

LOCATION

Between Platte Brug and Commewijne, crossing the Suriname River.

TIME

The activity will take place between 10-17 during the workshop day, each trip taking approximately 15-20 minutes from Platte Brug to Commewijne, and 10-15 minutes on the way back.

THE TEAM

4 volunteers for the story telling and recording. 2 Boat taxi owners/drivers. 2 video recording group. 1 Professional photographer and 1 Professional filmer (Shared with the rest of the activities), 3 assistants on land.

EQUIPMENT

2 boats (12-18 people per boat). Microphones and speakers (2 of each). Film cameras with recording equipment (2). Audio recorders (2). Graphic pieces Safety gear for each participant.

Activity no. 2: Another point of view

Get perspective upon the present as a tactic for placemaking and data collecting



Objectives

- Create a platform where people can get new perspectives upon the waterfront
- Contribute to material for the website

Activity

Taking advantage of the view of this spot, one installation will be placed on the site that can make the participant perceive the waterfront from different perspectives and views.

(i) The first installation is the “Two-perspective View tower”, in wood, which provides the viewer with different framed views with a panorama perspective.



Parameters

LOCATION

Commewijne port.

TIME

The objects required will be placed at Commewijne the same morning as the Workshop. The visits will span from 10-17, giving each participant about 5 minutes to contemplate from the View Tower, and 10 minutes to leave comments and feedback on the activity.

THE TEAM

Carpenters that build up the installations. 4 volunteers to clean up de site and prepare it for the activity, as well as collecting data. 1 Professional photographer and 1 Professional filmer

EQUIPMENT

The View Tower structure. Wooden chalkboard for collecting comments. Wooden boxes and furniture for sitting. Graphic pieces (signs, instructions, branding of the participatory website).

Activity no. 3: Bike lane

Tetsing future possibilities as a tactic to try out a design tool



Objectives:

- (I) Test one of the proposed interventions from Workshop I
- (II) Evaluate the intervention
- (III) Get useful inputs on how to develop the future biking networks

Activities and aims:

The bike lane will consist of two directions 1,5 meters per lane. In total the bike lane will be 3 meters wide. In case people did not come by bike to the workshop, there will be an opportunity to borrow bikes for approximately 45 min. In order to prevent that the bike won't get stolen, the person that lends it has to provide a personal item e.g. a driving license, that will be returned after the ride.



Parameters

LOCATION

Along the Waterkant. In total it will be 500 meters long. From there on, participants are encouraged to ride to anywhere in Paramaribo.

TIME

The activity will take place between 10-17. It is expected that the bike ride will not take more than 15 minutes, however, we encourage the possibility to experience the bike ride and therefore it will be possible to borrow the bikes for an hour.

THE TEAM

Volunteers that can help arranging the space, and collecting feedback from the users. Bike shops that rent the necessary equipment. 1 Professional photographer.

EQUIPMENT

Rented bikes (20). Bike pump (1). White spray paint (15 cans). Evaluation maps (150). Graphic pieces.

Activity no. 4: Tested hub

Wishing and testing future possibilities as a tactic to collect data and trigger new imaginaries



Objectives:

- (I) Idea collecting for the design
- (II) Link participation to website
- (III) Visualize the placemaking and activities by trying them out

The theme for this activity is to gather ideas and opinions for the future of the riverfront and provide a place making activity. It is important within this element to highlight the opportunity for the citizens to be involved and secure the fact that their voices counts.

Activities and aim:

- (I) Idea collecting “Make a wish, place a balloon”
- (II) Link participation to website
- (III) Visualize the future



Parameters

LOCATION

Next to Platte Brug, an area of 20 m² is required.

TIME

The activity will take between 10-17. The test bed hub is the center point of the workshop and connects the other activities, it is the place where people will depart and arrive. The visit is expected to take approx. 15 min and the activity of placing a balloon is around 15 min.

THE TEAM

8 Volunteers that can stand and inform, gather the information through phone cameras, and help with the settings and the activity during the day.
1 Professional photographer.

EQUIPMENT

Balloons (1000), cards (1000), graphic pieces, bigger canopy for shade (1), Sound system + generator.

3.

**A set of urban and public space design
tools from a participatory process input**

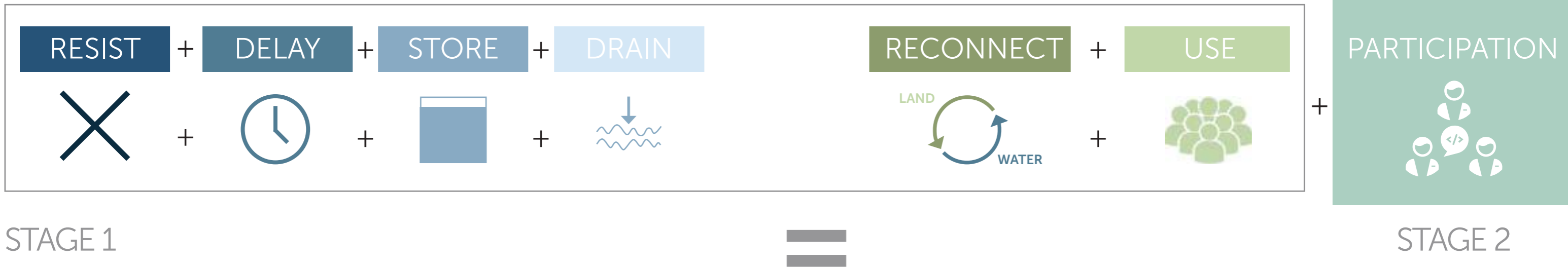
Identification of design tools and guidelines for the intervention

3.1. Main concept design and design tools

WATER MANAGEMENT STRATEGIES



LIVELY PUBLIC SPACES



RESIST

DELAY

STORE

DRAIN

RECONNECT

USE



+



+



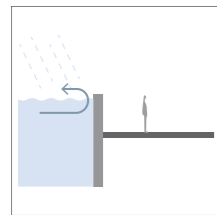
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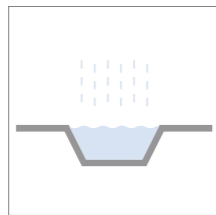
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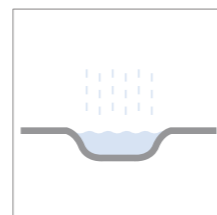
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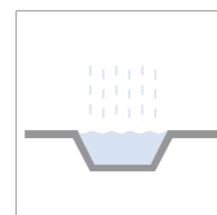
RETAINING WALL



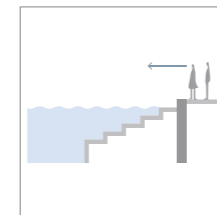
WATER CANAL



RETENTION PONDS



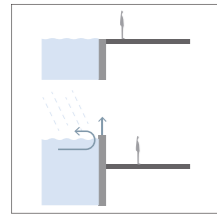
CANALS



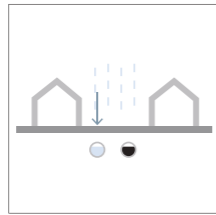
TERRACED EDGE



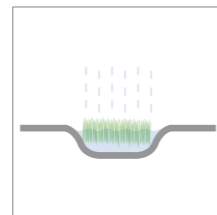
PROGRAMATIC DIVERSITY



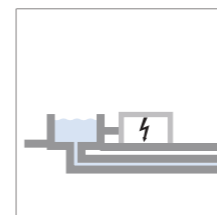
DEPLOYABLE FLOOD WALL



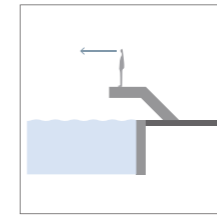
SEPARATE SEWAGE SYSTEM



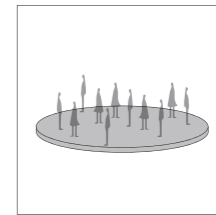
CONSTRUCTED WETLANDS



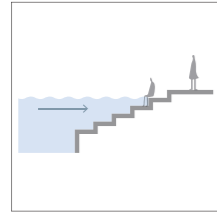
PUMPING STATIONS



VIEWING PLATFORMS



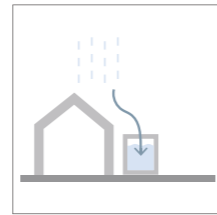
GATHERING PLACES



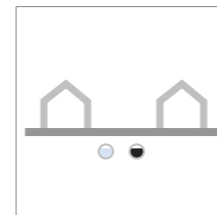
TERRACED EDGES



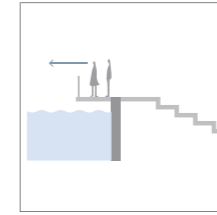
GREENER STREETS



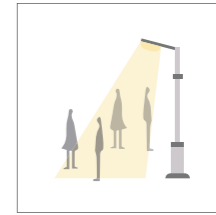
RAINWATER TANKS



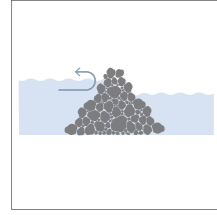
SEPARATE SEWAGE SYSTEMS



BOARDWALKS



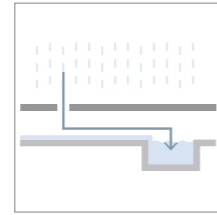
LIGHTING



CONSTRUCTED REEFS



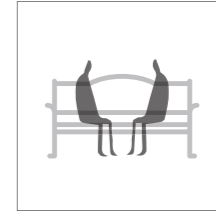
GREEN ROOFS



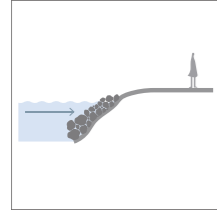
UNDERGROUND WATER STORAGE



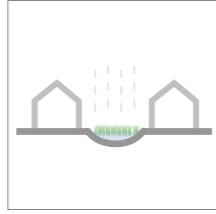
PIERS



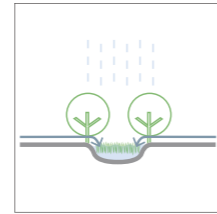
SEATING AREAS



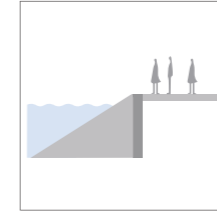
RIPRAP REVETMENT



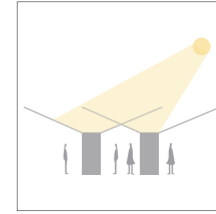
BIOSWALE



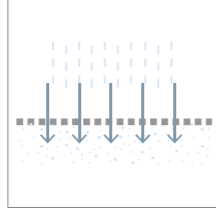
RAINGARDENS



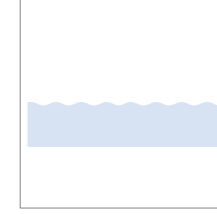
ACCESS POINTS



SHADOW



PERMEABLE PAVING

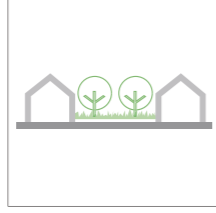


WATER ACTIVITIES

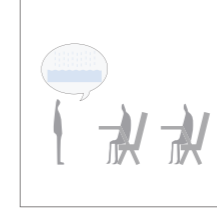


APPEALING LANDSCAPE

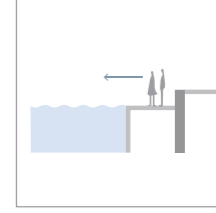
STAGE 1



VACANT LOTS AS GREEN INFRASTRUCTURE

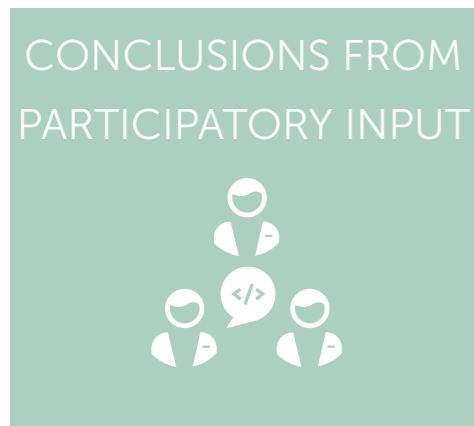
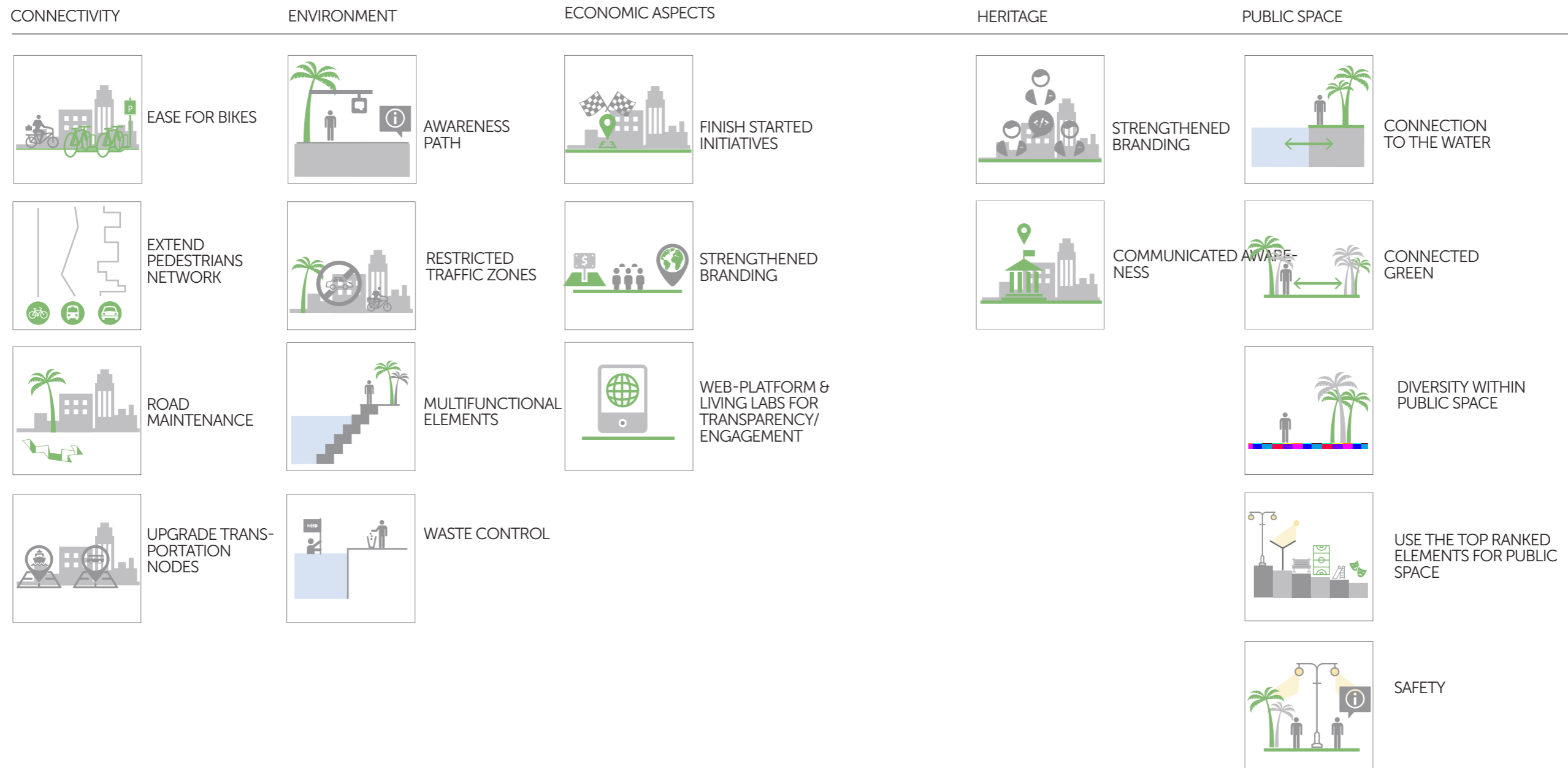


EDUCATION PROGRAMS AND PUBLIC AWARENESS



BOARD WALK NEXT TO THE WATER LEVEL

STAGE 2: PARTICIPATION



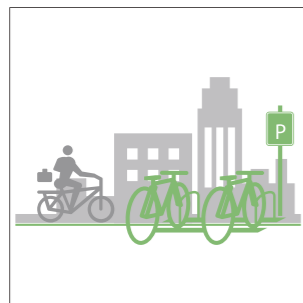
The design guidelines are the tools that have influenced and generated the springboard for the edited design work.

In addition, it is the design guidelines that provide the possibilities to increase the potential of the Waterfront public space design of Paramaribo as a historical public space, through its citizen's knowledge.

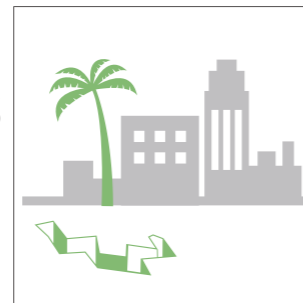
This is an overview of all the generated design tools and our interpretation after having analyzed and compiled the raw data that were provided during the process with participatory instruments.

Within the design not all the tools are ready to be used yet, however still important, they are statements to consider when moving on to the detailed design & construction phase.

Participatory input - Mobility



EASE FOR BIKES



ROAD MAINTENANCE

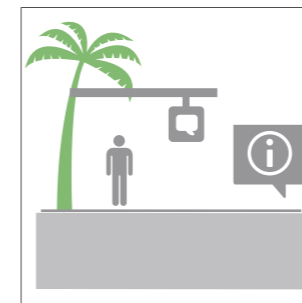


EXTEND PEDESTRIANS NETWORK

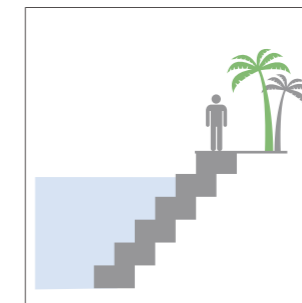


UPGRADE TRANSPORTATION NODES

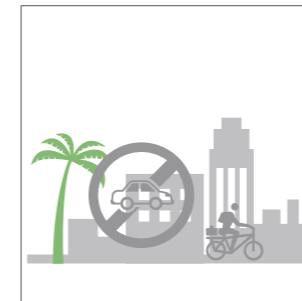
Participatory input - Environment



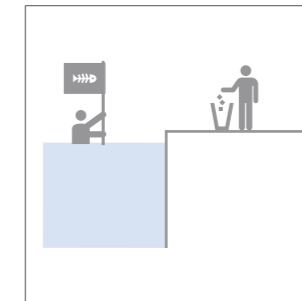
AWARENESS PATH



MULTIFUNCTIONAL ELEMENTS

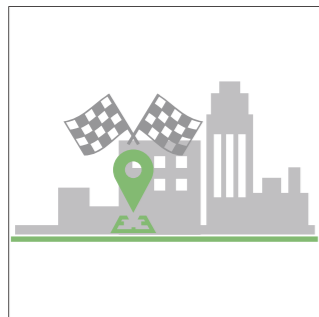


RESTRICTED TRAFFIC ZONES

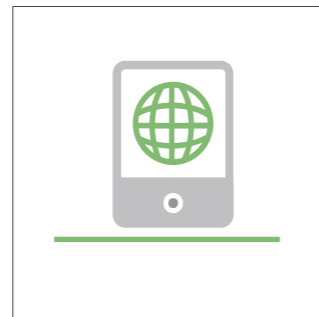


WASTE CONTROL

Participatory input - Economic aspects



FINISH STARTED
INITIATIVES

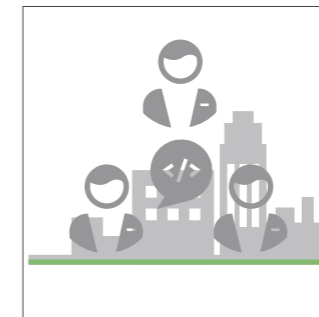


WEB-PLATFORM &
LIVING LABS FOR
TRANSPARENCY/
ENGAGEMENT

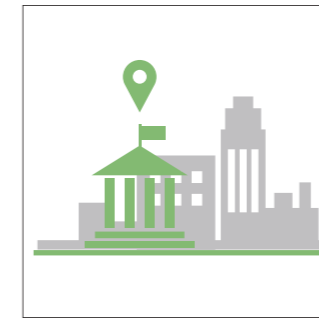


STRENGTHENED
BRANDING

Participatory input - Heritage



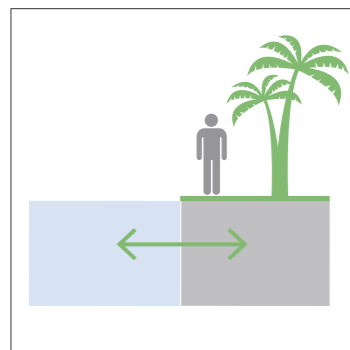
STRENGTHENED
BRANDING



COMMUNICATED
AWARENESS

Participatory input - Public Space

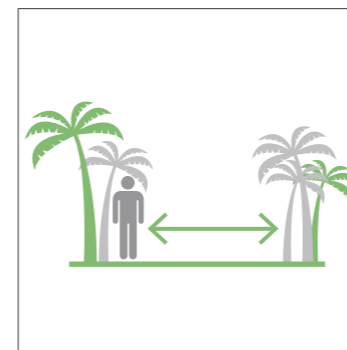
For the public space approach within the waterfront we propose the following tools based upon the participatory input:



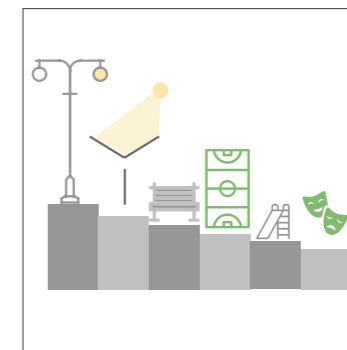
CONNECTION
TO THE WATER



DIVERSITY WITHIN
PUBLIC SPACE



CONNECTED
GREEN



USE THE TOP
RANKED ELEMENTS
FOR PUBLIC SPACE

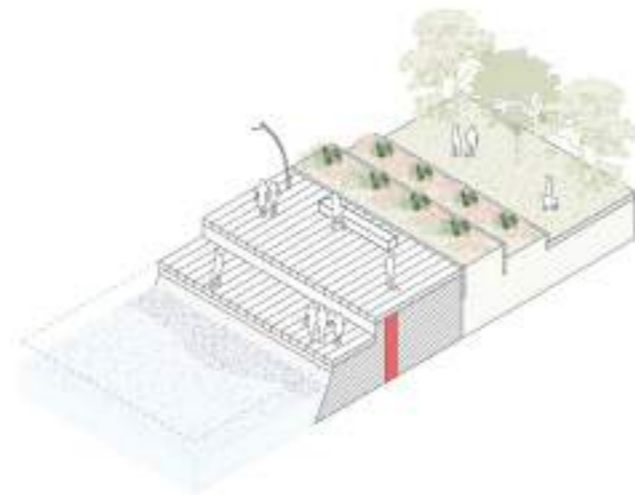
3.2. Infrastructure as public space: A retaining wall for water management and social inclusion



3.2.1. Retaining wall adaptation strategies

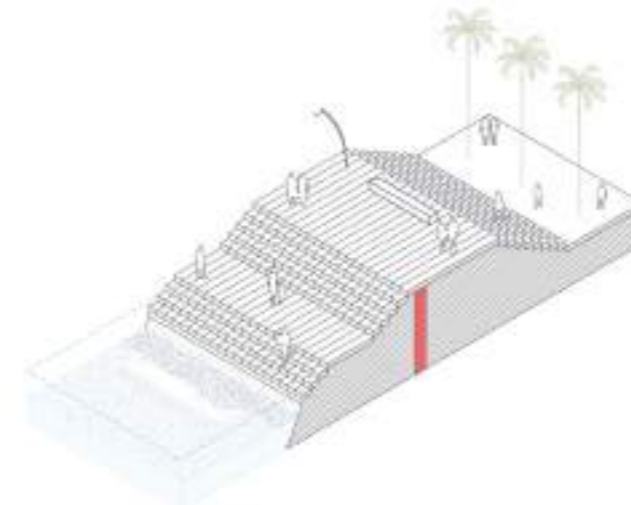


RETAINING WALL



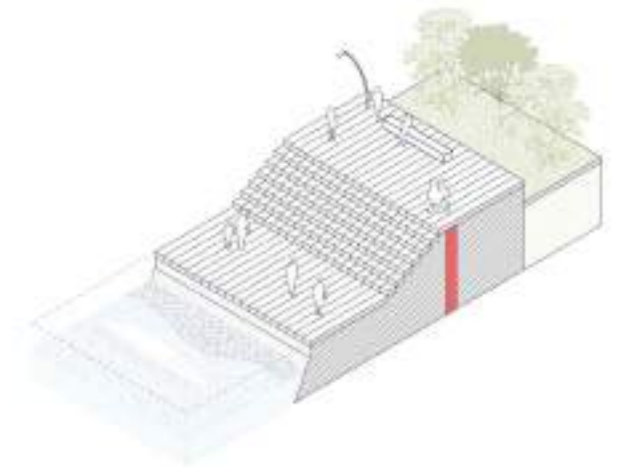
RETAINING WALL

+
BOARDWALK STEPPED GARDENS



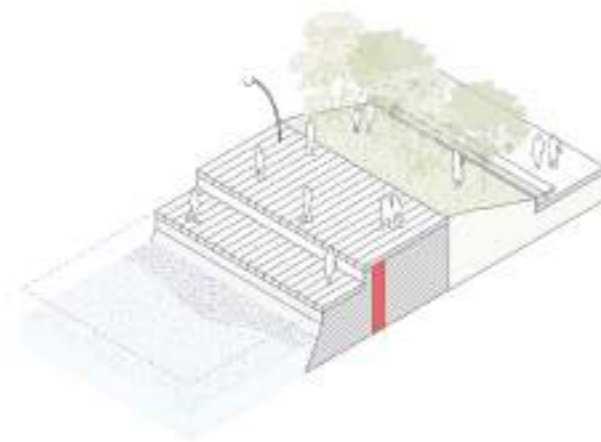
RETAINING WALL

+
URBAN STAGE DECKED STAIRS



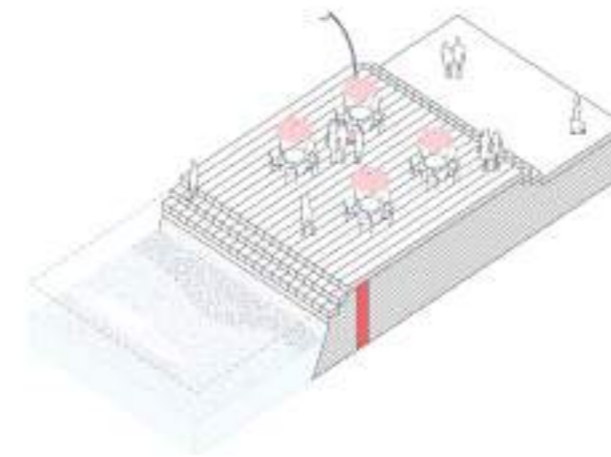
RETAINING WALL

+
DECKED STAIRS DENSE GARDENS



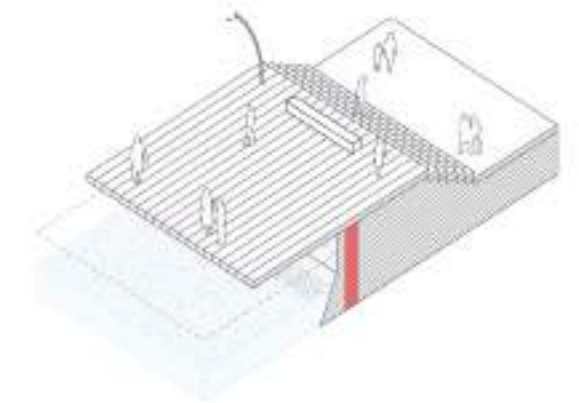
RETAINING WALL

+
SLOPES TOPOGRAPHIES



RETAINING WALL

+
TERRACES DECKED STAIRS



RETAINING WALL

+
BALCONIES DECKED STAIRS

Infinite strategies are possible to make the most out of the retaining wall, granting a direct relationship with the water and a variety of activities along the river.

4.

**Final Recommendations to the City Center
Area general vision**

A Comprehensive strategy to revitalize the historic center

4.1. Recommendations over the city center area of influence comprehensive strategy to revitalize the historical center.

Design proposal for a green and revitalized city center



Paramaribo's historic inner city center reflects the country's multi-ethnic and multicultural environment.

The center is in need of a revitalization plan that attracts new activities to the area. Given the high percentage of empty lots, parking areas and deteriorated buildings within the center, there is a lack of lively everyday activities and public spaces. Green spaces are the public areas which citizens value most, as it was visible during the community workshops undertaken during the design process.



The strategy to revitalize the city center is based on the extension and recuperation of green areas along the Sommelsaijksekreek to the east and UNESCO's delimitation area to the west. These series of green areas form a circuit that work as a transition belt between the city center and the nearest neighborhoods. Green areas provide shadow and public places of leisure and recreation for a wide diversity of users and also play a key role in the creation of stormwater management strategies.





Keizer straat today is an important street and node for the City center and can be improved further through added network for pedestrians and bikes.



The bus station is a natural node and by upgrading the area and adapt the availability it will better serve its functions within the city center.



The nodes stated from, stage 1, remains. However, it is possible to also incorporate the design tools generated from the participatory input. Within the urban scale, the design tools that have been added in particular are; the tools “Ease for bikes” and “the web platform”.

4.2. Recommendations over the city center area of influence Rebuilding the collective imaginary of the urban landmarks

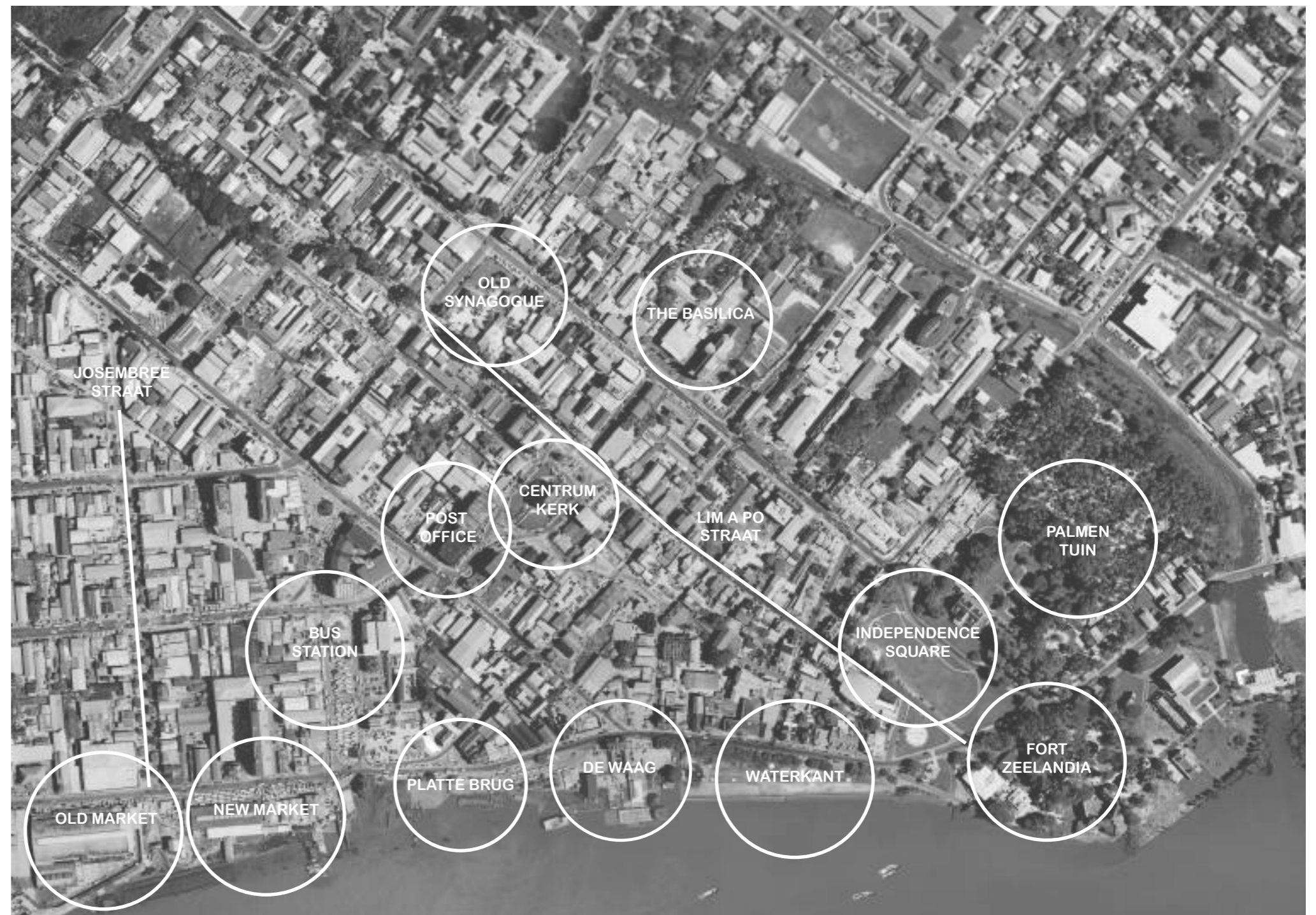
Re-articulate the city with the Suriname River



Palmen tuin, the park that the participants described as very active. It is here most of the event takes place and it is a natural meeting spot because of the large space and the amount of shade.

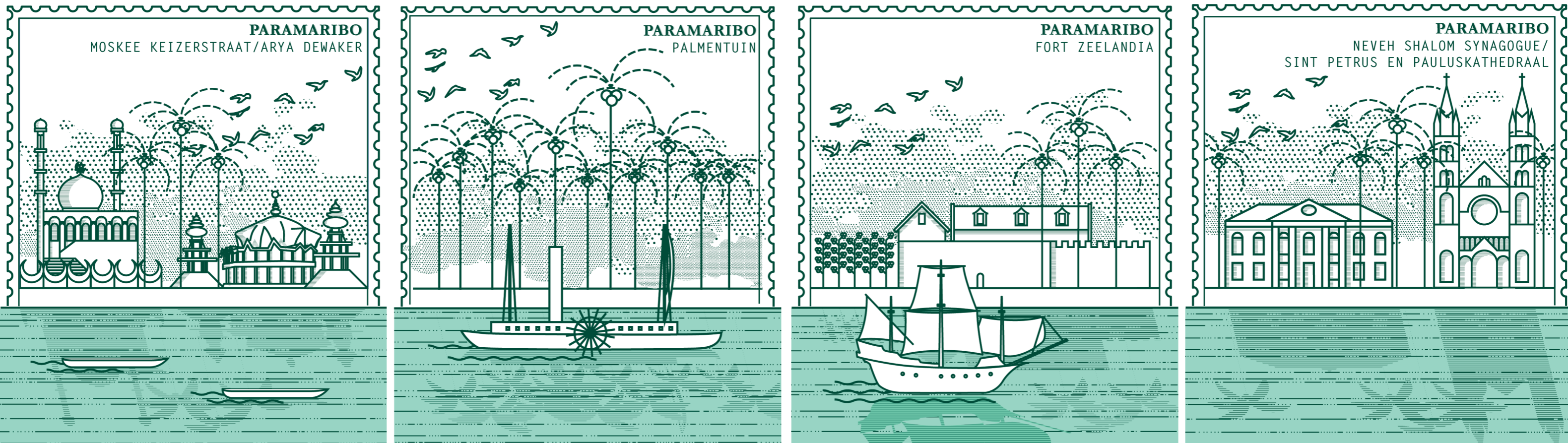


View over the bus station, which many participants described as deteriorated, however, a very important area which therefore ought to be prioritized in terms of redevelopment.



From the participatory input within the scale of city center there were certain key areas that were mentioned to be taken into consideration. In addition, many of the stated key areas were already covered within the first stage of the design. However, it is important to mention that the recurrent areas that were mostly stated to be important were the Basilica of St. Peter and St. Paul, Fort Zeelandia, Palmen tuin and the Independence square. Followed by the Old Synagogue, the Waterkant and the bus station.

4.2.1. The image of Paramaribo



During the living lab it was clear that one of the main successes were the set of illustrations about the main landmarks in the city center. In each conversation this point came out, and one of the main conclusions after the living lab was the importance to be able to generate a strong way to highlight the historical importance of the center, the waterfront and its components.

Symbols and signs of the city strengthen this perception of the citizen. Understanding the image of the city and its urban elements, depends on experiencing events and memories of people about the space, expresses the history and significant places of the city for its inhabitants.

4.

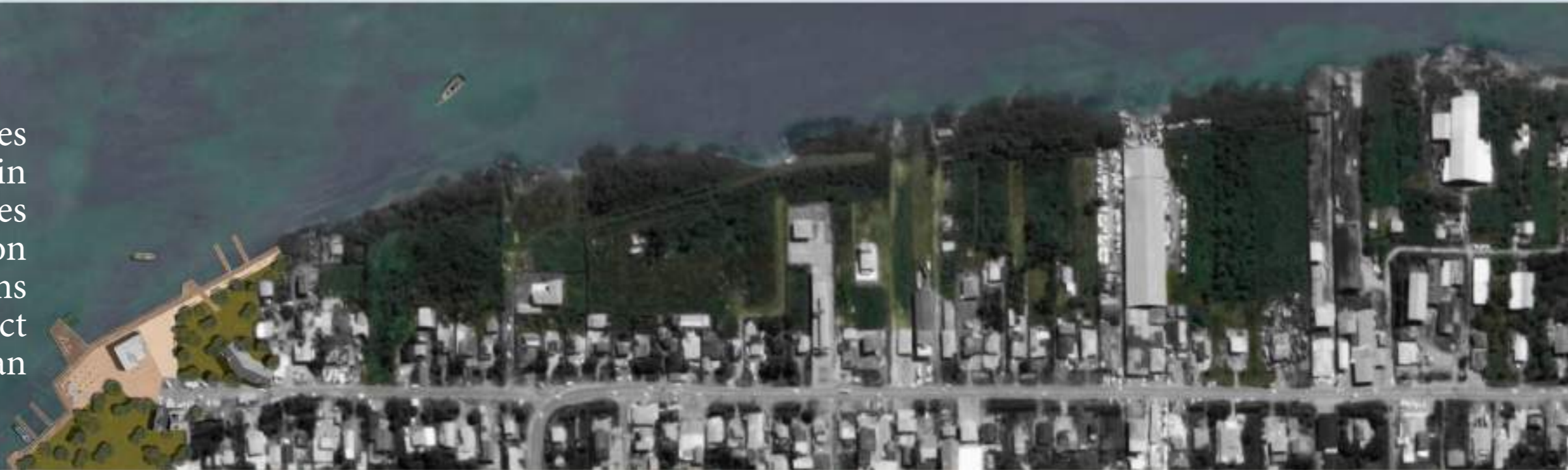
**Final recommendations to the Waterfront Mater Plan
and Urban Design Intervention**

Re-articulate the city with the Suriname River and
structure the implementation plan based on phases

5.1. Intervention Area

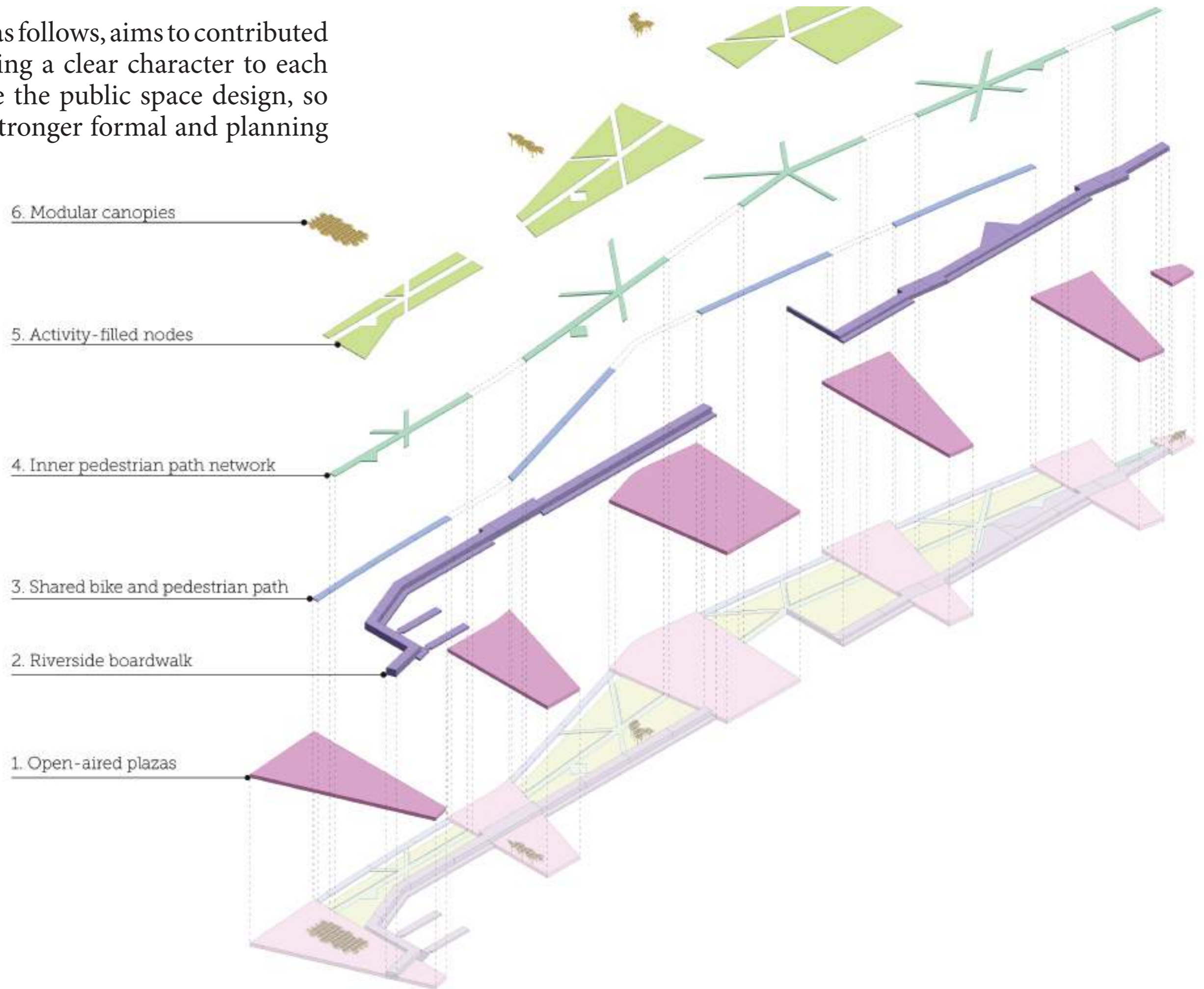


The waterfront synthesizes the main strategies at stake in order to bring back activities to the city center: the creation of multifunctional programs and public spaces that attract a diversity of users on an everyday basis.



5.2. Urban design elements: A tool kit

The tool kit presented as follows, aims to contribute to the strategy by giving a clear character to each element that compose the public space design, so to be able to give a stronger formal and planning understanding.





1. Open-aired plazas



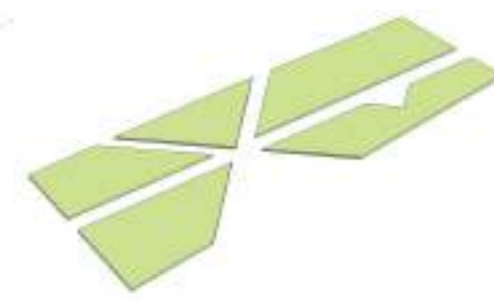
2. Riverside boardwalk



3. Shared bike and pedestrian path



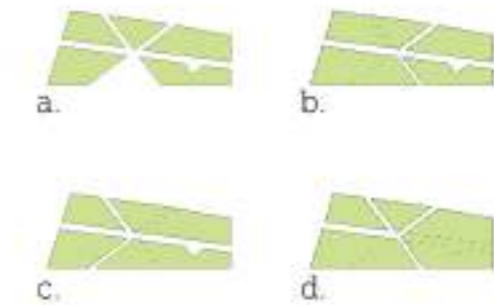
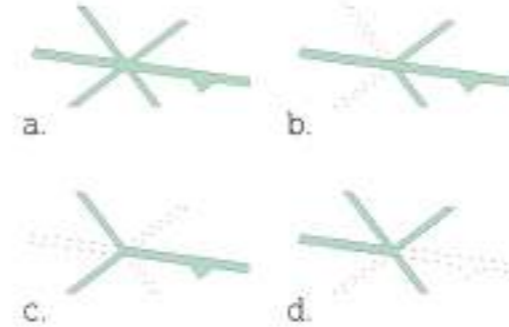
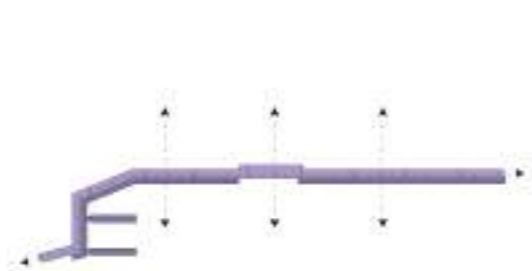
4. Activity-filled nodes



5. Inner pedestrian path network



6. Modular canopies



The plazas function as urban funnels, channeling vistas and stretching the streets all the way to the Suriname River. Each plaza points towards a different direction, thus highlighting varied elements at the other side of the river.

The boardwalk longitudinally connects the areas from Fort Zeelandia to the Central Market, while providing a direct contact between the city and the river.

The different sections across the boardwalk propitiate varied activities and relationships to the Suriname River.

An outermost bike lane and pedestrian grove constitutes the renewed face of the Waterfront. While building a safety barrier from the cars, the new grove prioritizes pedestrian mobility and accessibility over vehicle movement.

The inner path network collects people from strategic points of the project, and leads them directly to the core of action.

The network functions as a flexible system, one that can be subdivided in as many branches as needed, depending on the desired connections and program.

The path network condenses peaks of activity on concrete nodes along the Waterfront, ensuring movement and use all across the intervention.

Just as the path network, these centralities are flexible and allow different configurations and a multiplicity of programs.

Shade is provided on strategic points by a set of modular canopies, which can house different events, from spectacles to cafés and restaurants.

The canopies function as an unfinished, open system -based on a simple, geometrical pattern- one that can be built progressively and support changes in use over time.

5.3. Waterfront Masterplan

The waterfront is essential to provide design alternatives for the retaining wall as a measure of risk reduction. These alternatives should be able to pair strategies of public space revitalization and strategies of mitigation and adaptation to climate change.



5.4. Urban design rehabilitation strategies

One of the main opportunities in the challenge of adapting to climate change, especially in such frames like local management of sustainable water, is to generate approaches that are capable to articulate technical solutions with ecological elements, design of public space strategies and local socio-economic development.

With this vision we emphasize that through the investment in infrastructure for this project, it is possible to generate the possibility of serving diverse public functions, impacting more population and generating a unique visual on the project of the historical center that manages to attract the attention of the public in general.



Activity nodes

Concentrate the activity on specific nodes, directly related to the plazas that surround them. The modular, open system reaches out and brings people into the project, thus granting a connection to the city and an active use of public space.



Horizontal "knitting" Reconnect the area between Fort Zeelandia and the Central Market through longitudinal pedestrian paths disposed across the Waterfront, an outermost bike lane grove and a riverside boardwalk knit the whole project.



Longitudinal connections

Concentrate the activity on specific nodes, directly related to the plazas that surround them. The modular, open system reaches out and brings people into the project, thus granting a connection to the city and an active use of public space.



Urban connections Extend the streets towards the river to ensure a direct, visual connection between the main urban infrastructure and the water, creating activity-filled piers further enhancing the connection between the city and the river.



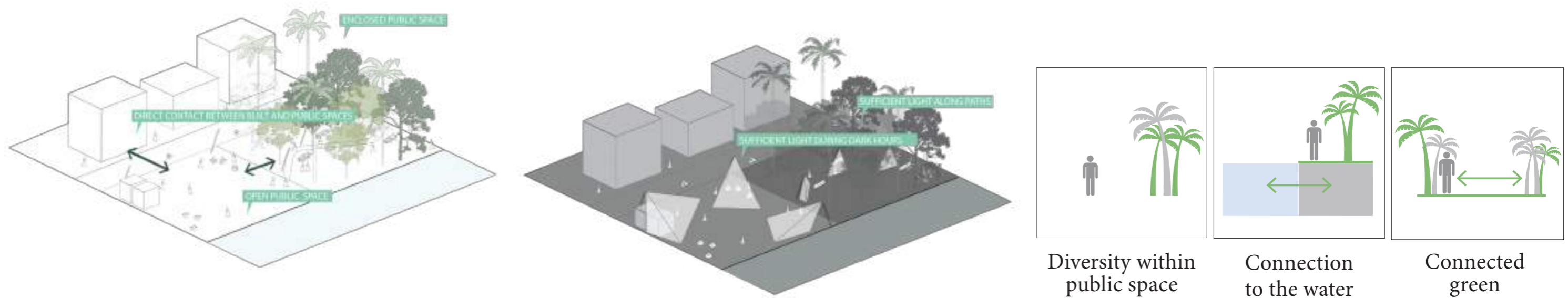
Active water management

Integrate both the stormwater management and the public space design. The creation of a vital waterfront demands strategies to re-connect the city with the river by adapting the concrete retaining wall.

5.5. Urban design actions



(i). Safety actions

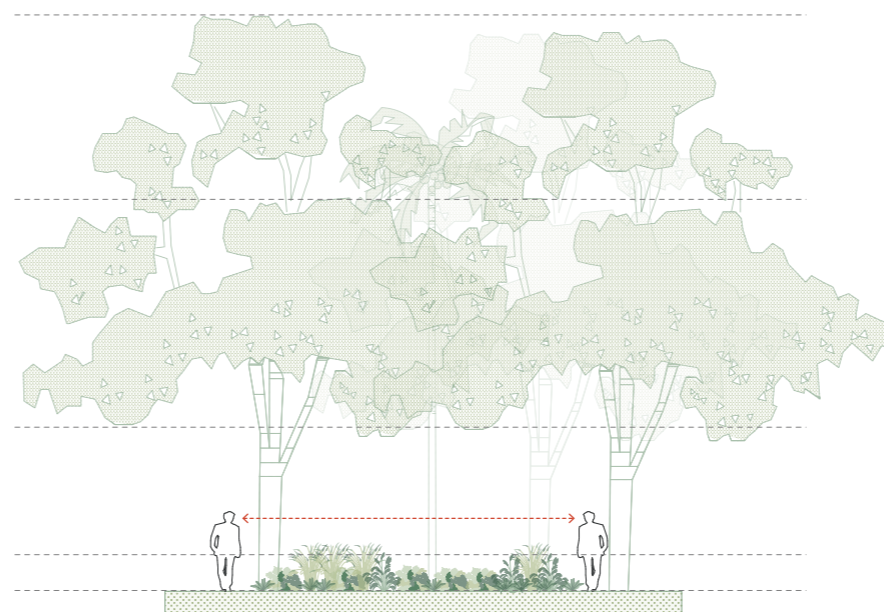
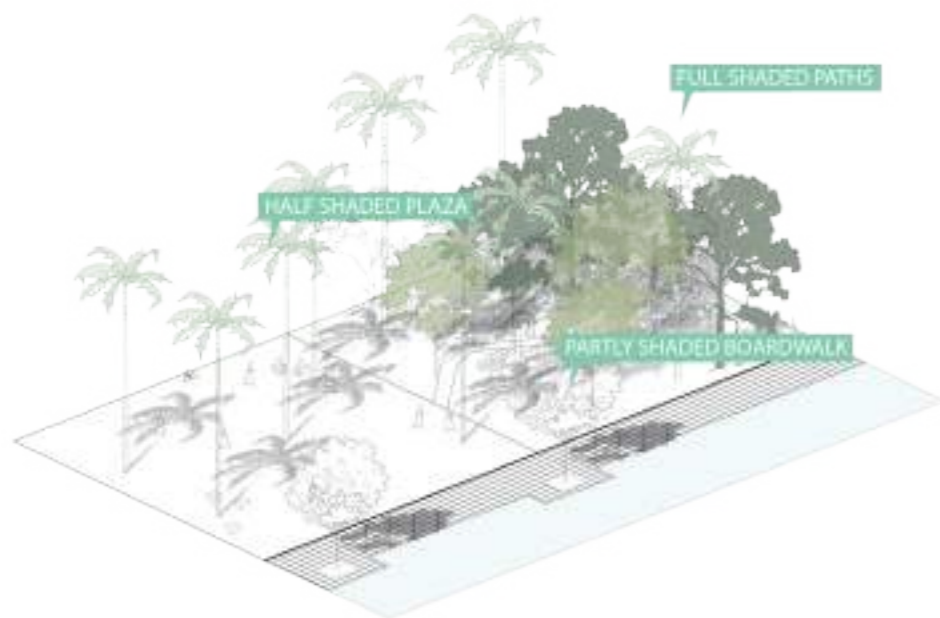


A well-lit network of pedestrian paths, surrounded by varied activities, ensures that the new waterfront is active both day and night.

Careful placement of vegetation, with high-canopy trees, ensures a direct visual relationship between the built environment and the proposed public space.

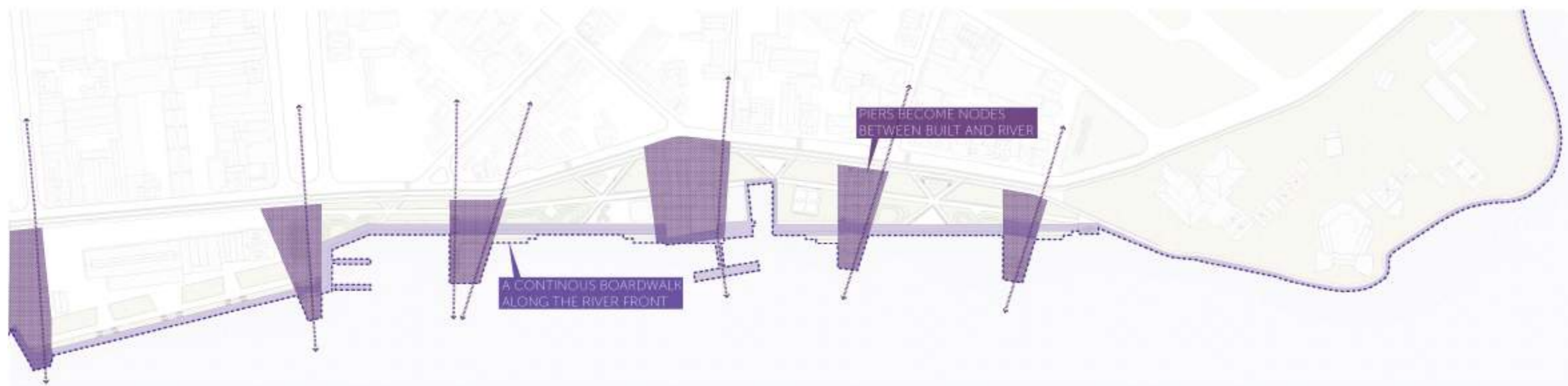


(ii). Weather comfort action: Levels of shade depending on the proposed vegetation



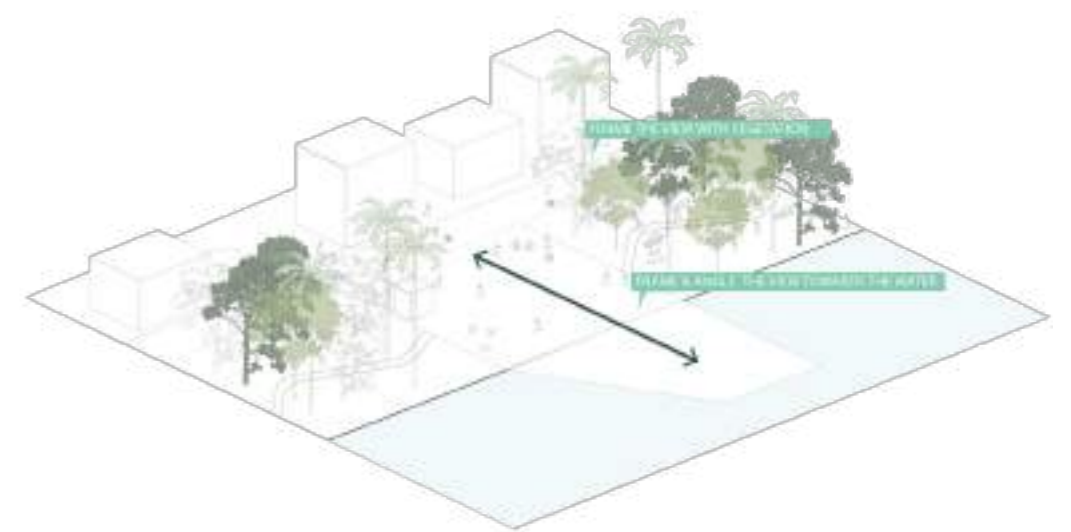
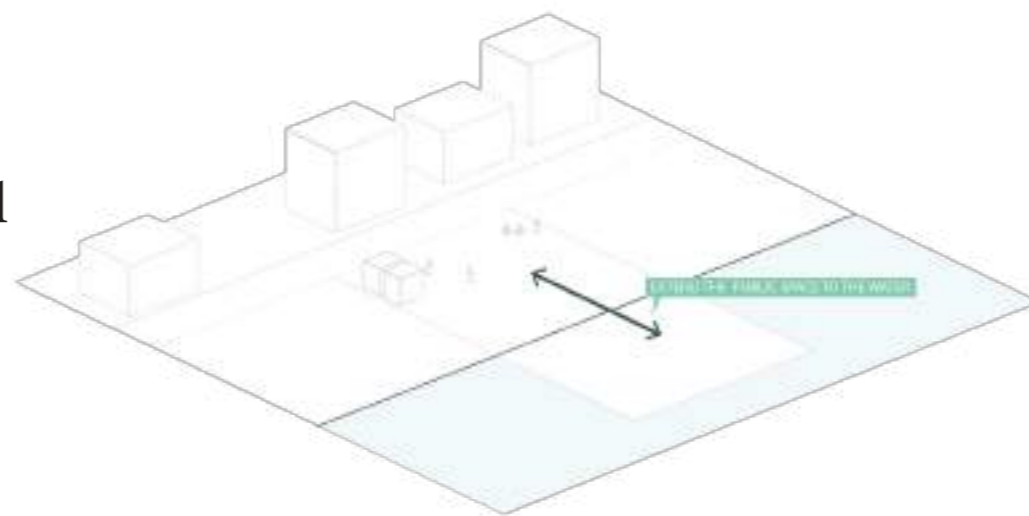
A careful selection of the vegetation, using native species, is the basis for a network of half-shaded groves and fully shaded paths that run along the waterfront. However the plazas remain open aired, only with palm trees as the iconic elements that set them apart from the rest of the project.

(iii) INTENSIFY THE CONNECTION TO THE RIVER

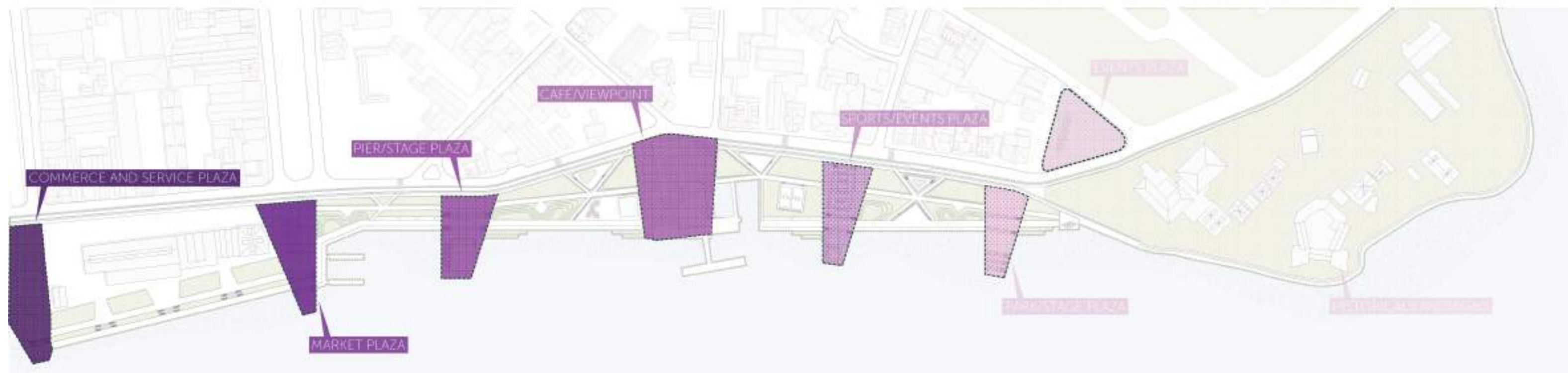


(iii).Integration action: Strengthen the connection between the city and the river

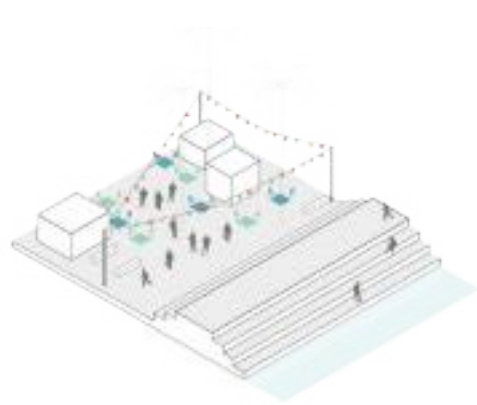
The response strategy is based on making the most out of the protection and water management systems, by turning the retaining wall into a waterfront-long boardwalk, and enhancing the existing connections between the built and the river.



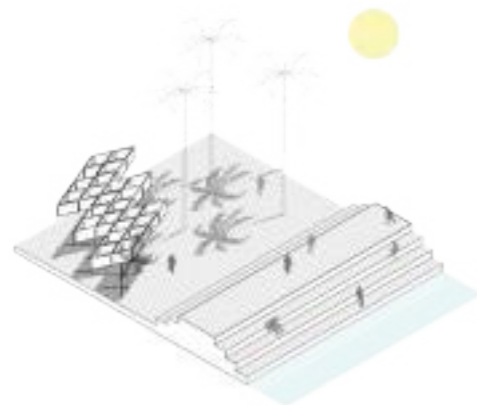
(iv) FLEXIBLE PLAZAS AND OPEN SPACES



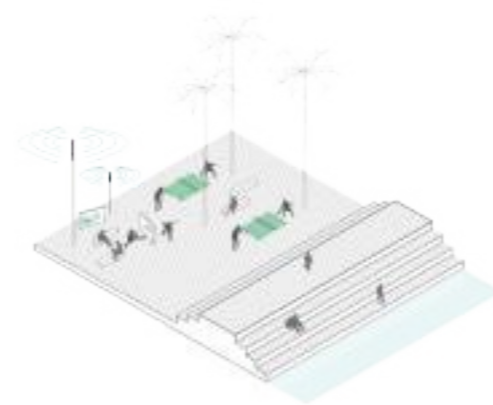
(iv). Flexibility action: plazas and open spaces



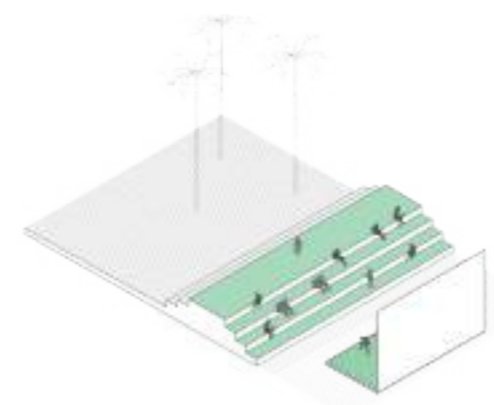
Gather for events



Use the sufficient microclima



Connect & recharge
Game & educate



Take the stage

A series of open-aired squares are placed throughout the Waterfont, and serve as extensions from the city to the river. Shaped as cones, and angled toward different vistas, the piers are to be the main civic spaces in the project.

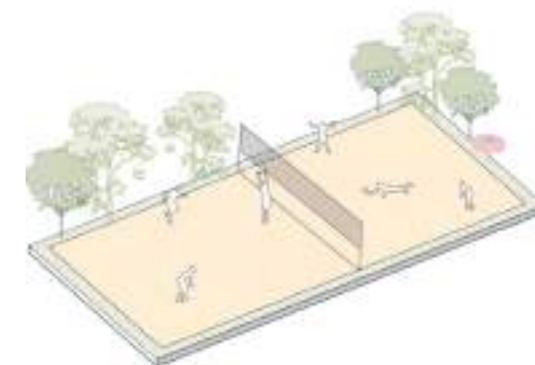
Each one of them has specific characteristics that constitute a variety of activities across the Waterfront.

(v) ACTIVITY-CHARGED NODES



(v). Circulation Network action: inner paths and activity nodes

The paths collect people from the streets and take them deep into the public space, granting a sense of safety. The variety of activities distributed along the nodes complement the flexible character of the open plazas.



THEMATIC GARDENS

FAMILY AND RECREATION

COMBINED SPORTS

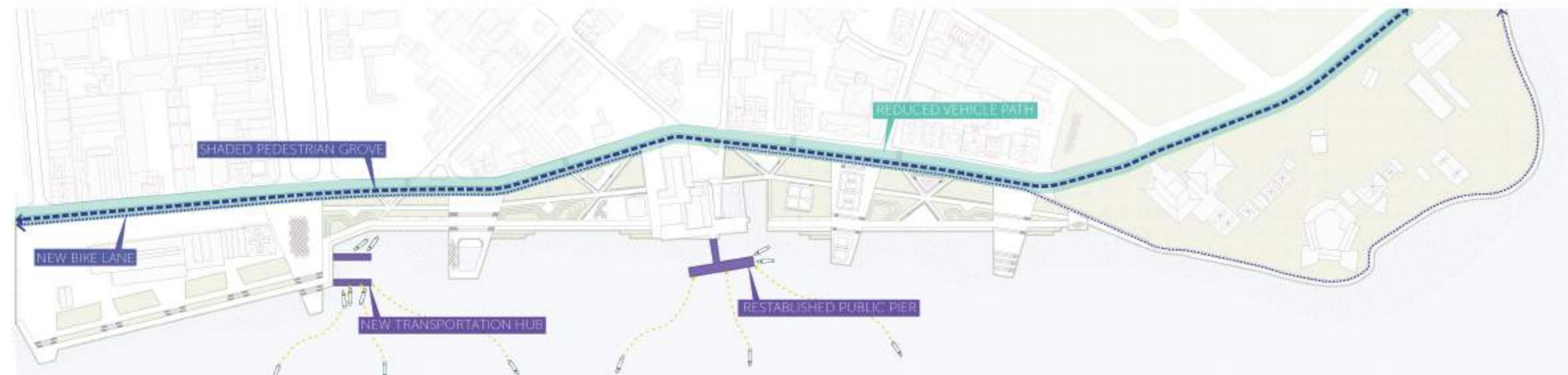
CULTURAL

(vi) CONNECT THE WATERFRONT TO ITS SURROUNDINGS



(vi). Continuity action: Elements of longitudinal connection along the Waterfront

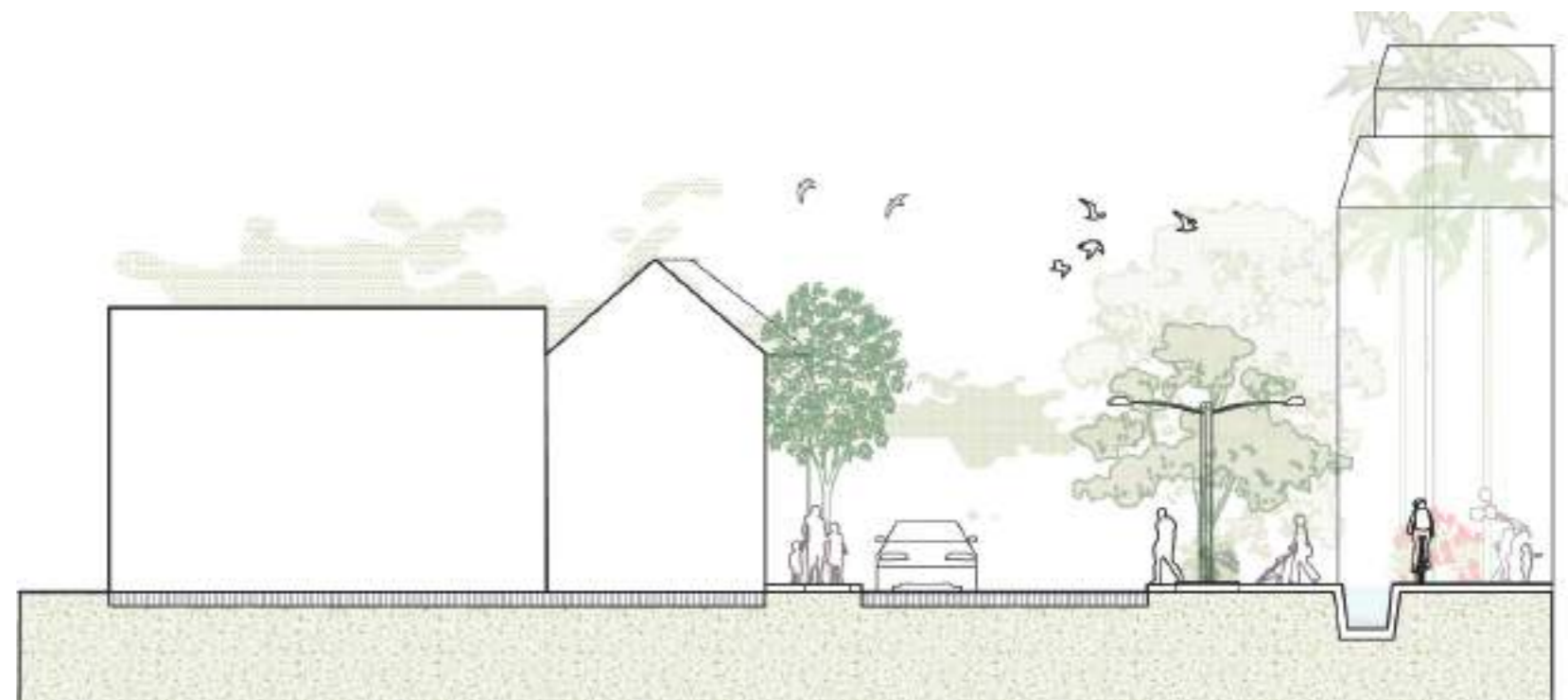
A series of longitudinal elements connect Fort Zeelandia to the Central Market: An outermost bike lane and pedestrian grove constitutes the renewed face of the Waterfront. While building a safety barrier from the cars, the new grove prioritizes pedestrian mobility and accessibility over vehicle movement.



(vii). Mobility Action

Most of the previously five lanes space of the Waterkant Road is given to a new pedestrian grove that, joined with a bike lane, allows people to safely move down the Waterfront.

The old boat terminal, at Platte Brug, is now turned into the main scenario of the intervention, thus displacing the transportation hub right next to the Central Market, where the old ferry port used to function.



5.6. Identification of Urban vocations and areas of activity





Central market

Possibilities: Strengthen the connection to the water. Improve the Public space. Attract local people/tourists, also the trade and the use as a link to the commercial city center.

Challenges:

The market hall is in need of a restoration, problems with waste, crowd and traffic.



Platte brug

Possibilities: The space as a meeting place, the concentration of public transportation and the boat traffic to Meerzorg.

Challenges: Polluted, crowded, lack of shade and an area with heavy traffic congestions.



De Waag

Possibilities: The Historical building and its heritage.

Challenges: Connection to the river and the rest of the waterfront area.

Fort Zeelandia

Possibilities: Described as high historical value, cultural heritage, high tourist activity, historical walks, occasional sporting events, lot of greenery, shade, recreational use, yearly swimming events.

Challenges: The limited access for the public use.



Waterkant/ Retaining Wall

Possibilities: Space for activities, the existing wall and the effort already made for public space and active presence of tourists.

Challenges: The limited view of the waterfront building because of the food hubs and in some spaces the high wall. People stated that they felt unsafe here due to the use as a meeting spot for homeless people and people with drug addictions.





Area 1: Platte Brug

We propose the following elements:

- Recreation and playgrounds areas in both, land and over the water (ex: a pier, urban beach)
- Architectural canopies to provide comfortable hubs/places for diverse proposes (market, cultural events, fairs)
- Increasing the number of trees with wide canopies that can provide shade and frame the river.
- A wall that can incorporate water resistance and public space
- Retention ponds and Bio swales

Layers:

- Biking lane

Area 2: Fort Zeelandia

We propose (I) reconnect it with the rest of the waterfront (II) additional public activities.

Based on that elements that we propose:

- Eliminate the divisor fence
- A biking lane along the waterkant that can enter to the Fort zeelandia
- Activities programed by the district



Area 3: Waterkant

We propose the following elements:

- Sports field of different kinds and sizes
- Green spaces in form of trees, shrubs, flowers and grass lawns that can be used for sports or picnics.
- Elevated viewpoint
- Modular and mobile commercial elements
- Bio Swales and Retention ponds

Area 4: De Waag

“The historical and commercial node”, we propose the following elements:

- Modular and mobile commercial elements
- Structural and design improvements to the historical buildings
- Urban furniture
- Green spaces in form of trees, shrubs, flowers and grass lawns
- A wall that can serve the public space

Area 5: Central Market

“Market Area”, we propose the following elements:

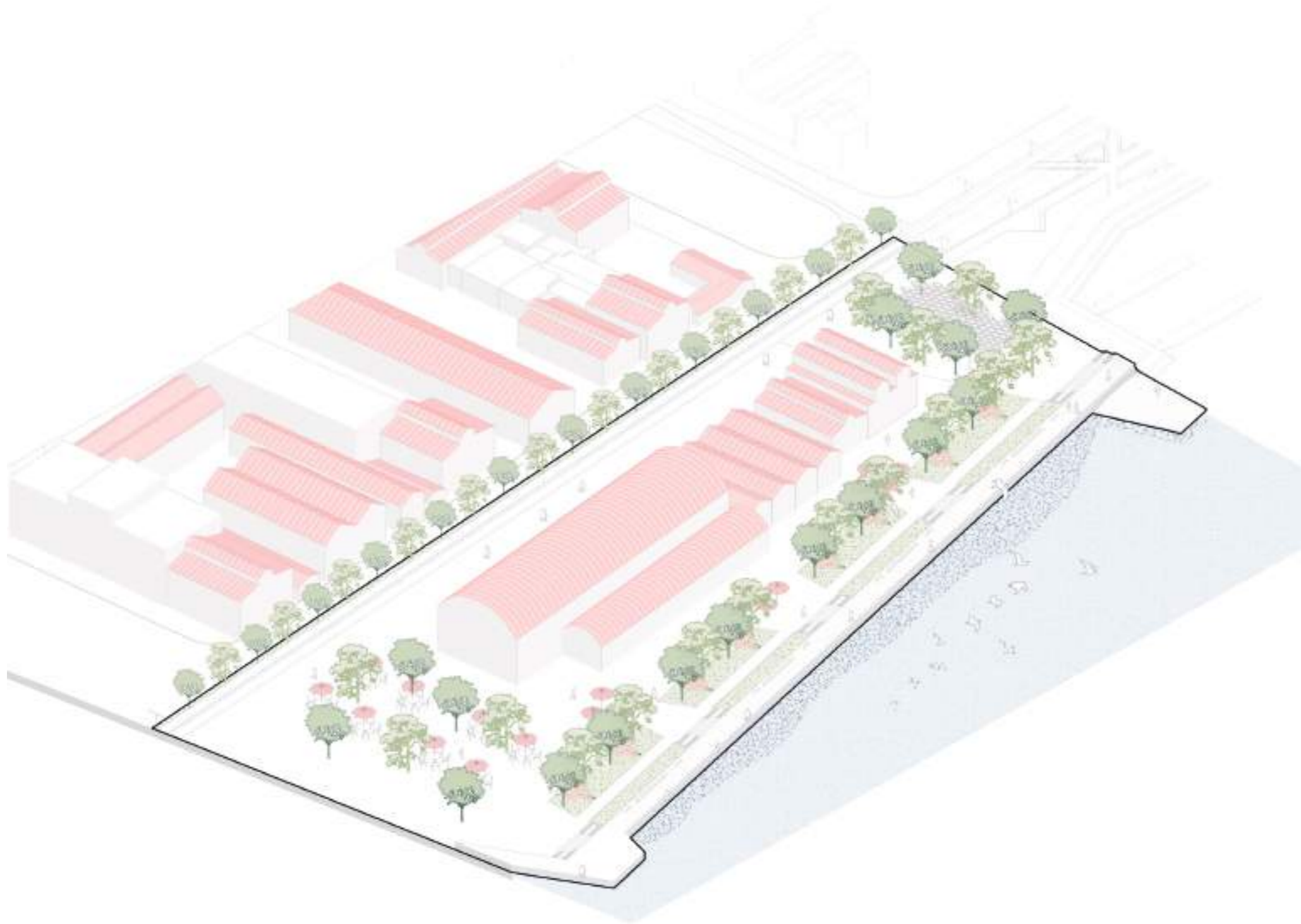
- Structural and design improvements to the historical buildings
- Green spaces in form of trees, shrubs, flowers and grass lawns
- Canopies for outside selling and food events
- Pier for fishers logistics and water selling boats
- a wall that can be combined with public space functions and serve the function of a continuous boardwalk an outdoor serving

5.7. Urban vocations and areas of activity



Five main areas of activity have been identified through analysis and participatory workshops:

1. CENTRAL MARKET - Water transportation and Market hub.
2. PLATTEBURG – Waterkant Event Park.
3. DE WAAG – Food currt hub.
4. WATERKANT – Sports and leisure hub.
5. FORT ZEELANDIA – Culture and heritage hub.
6. COMMEWIJNE PORT – Water transportation and fishers hub.



View over Area 5: Central Market



1. Central market:

This is one of the main active areas over the waterfront because it reflects the multicultural character of Surinam and yet, one of the most deteriorated and with lack of public space.

Direction based upon participatory input:

- Strengthen the public space around the market hall
- Plan for an attractive more commercial space for inhabitants and tourists
- Strengthen harbour functions and the access by boats/ferries
- Restore the Market hall



View over Area 1: Platte Brug



2. Platte Brug:

This area, today highly deteriorated, is located in the intersection of Heiligenweg, around the center's main bus stop terminal and the waterfront section where the ferry used to stop.

Direction based upon participatory input:

- Strengthen the areas potential for meeting space
 - Provide shade
- Prioritize the pedestrians connectivity
 - Intensify the connectivity to water



View over Area 4: De Waag



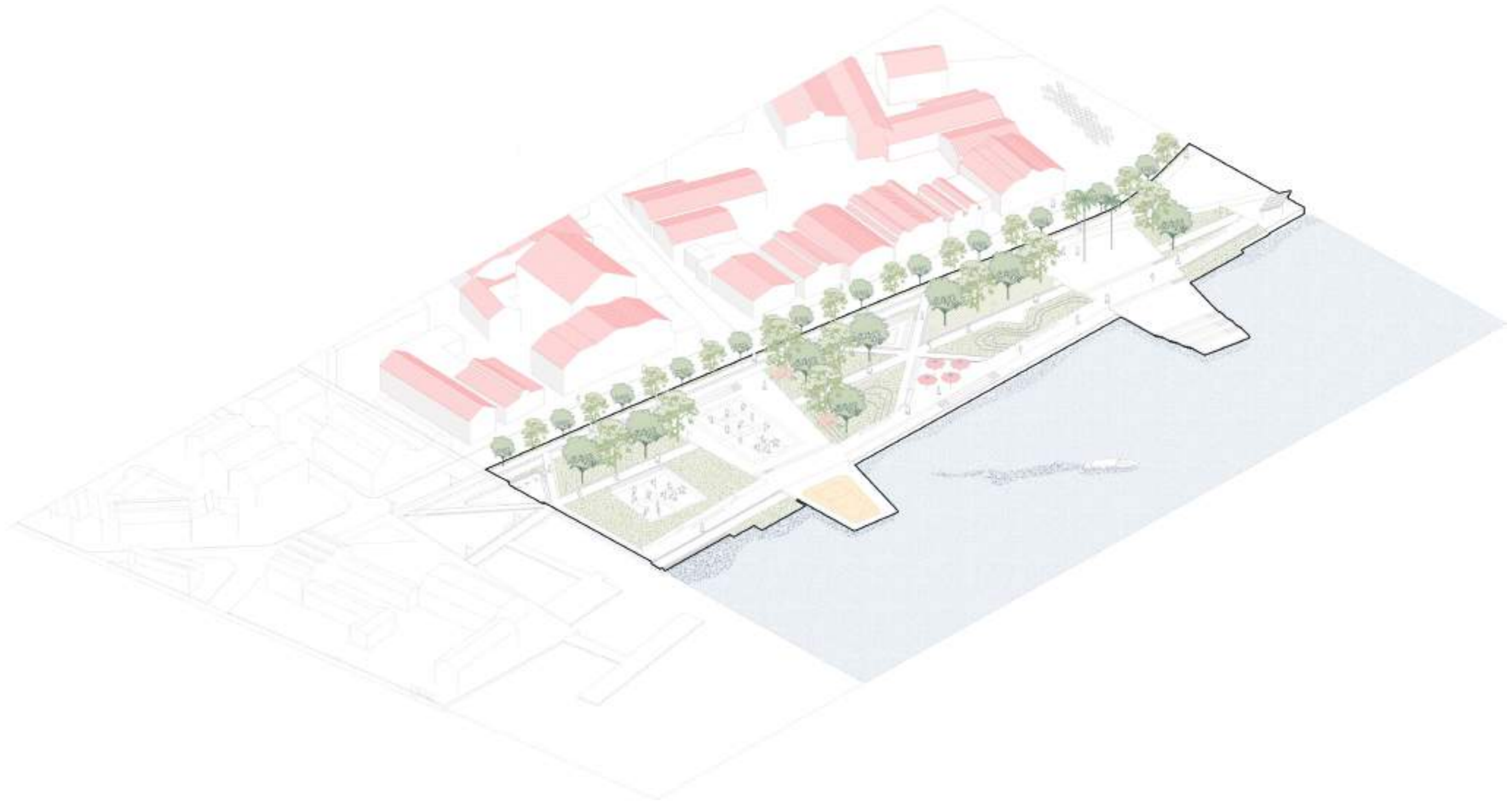
Children playground | Shaded path | Café canopy | Boardwalk

3. De Waag:

The old departure area holds historic landmarks. Currently, the access to the waterfront is restricted although a few restaurants activate the area.

Direction based upon participatory input:

- Connect De Waag with the water
- Strengthen the relationship with the surrounding areas of the waterfront



View over Area 3: Waterkant



4. Waterkant:

This is one of the best well kept areas of the waterfront there is no relation between the city and the river and is underused.

Direction based upon participatory input:

- Provide good and view between the water and the Waterkant
- Added space for activities and sitting elements
 - Complementary trees and shrubs



View at Area 2: Fort Zeelandia

5. Fort Zeelandia:

The colonial fort is one of the city's main cultural landmarks and is one of the best well-kept areas.

Direction based upon participatory input:

- Provide a good and open connection between the area of Fort Zeelandia and the Market Hall
 - Strengthen the area as a public space
- Improve and restore the historical buildings inside of the area



View over Area 6 Commewijne Port

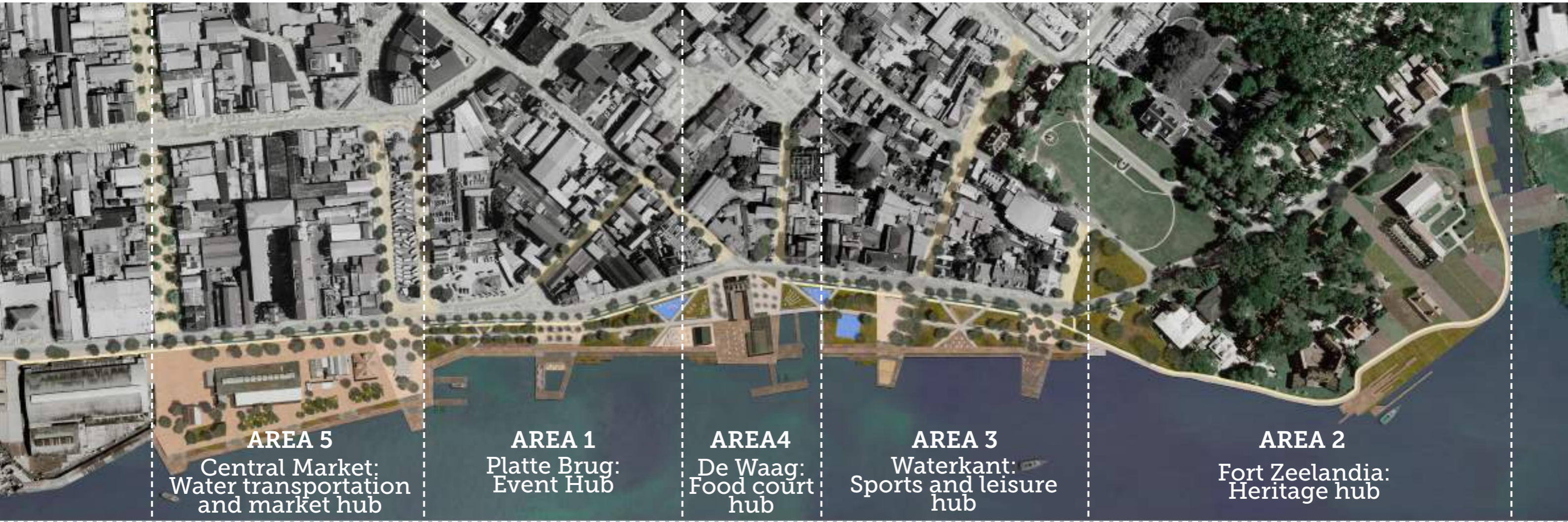


6. Commewijne Port:

The workshop proved a success over reactivating the old ferry port at Commewijne, by activating an abandoned structure and generating a new perspective over the Waterfont at the same time.

Direction based upon participatory input:

- Reactivating the old ferry port with new, varied activities
 - Providing a new port specially for the fishermen
- Build a landmark, such as the viewtower, to highlight the Commewijne district
- Regenerate the area through a water management strategy



AREA 5
Central Market:
Water transportation
and market hub

AREA 1
Platte Brug:
Event Hub

AREA 4
De Waag:
Food court
hub

AREA 3
Waterkant:
Sports and leisure
hub

AREA 2
Fort Zeelandia:
Heritage hub



AREA 6
Commewijne Port:
Water transportation
and fishermen's hub

6.

**Final recommendations to the Phase I:
Waterkant Events Park**

Prioritization of specific initial projects within the Waterfront Area, and
final technical inputs for the final executive design and construction

6.1. Public space Intervention area



The waterfront will become Paramaribo's new and most visible park—one that can be built in different phases through the systematic strategy, the design is an open system made out of pieces that can be implemented individually and grow in time.

The prioritizations for the phases are very important in this project and have been discussed since the first Master plan “Comprehensive design strategies for a sustainable and lively waterfront” from February 2017. There the potential was seen in starting with the Waterkant area base on the argument that i) It is the area that holds the nalized portion of the retaining wall infrastructure; and ii) There is the institutional presence of the waterfront board to take care of the intervention.

This phases order will guaranty that i) that the usable area of the waterfront will raise to the % , ii) the recognition by the citizens of its impact will be bigger and iii) that it will generate an anticipated new image that will be later consolidated by the fastest and cheaper implementation of phase 2.



Stormwater collector

Pedestrian grove

Bike lane

Children playground

Riverside boardwalk

Shaded paths

Rest areas

Café-Bar area

Water transportation piers

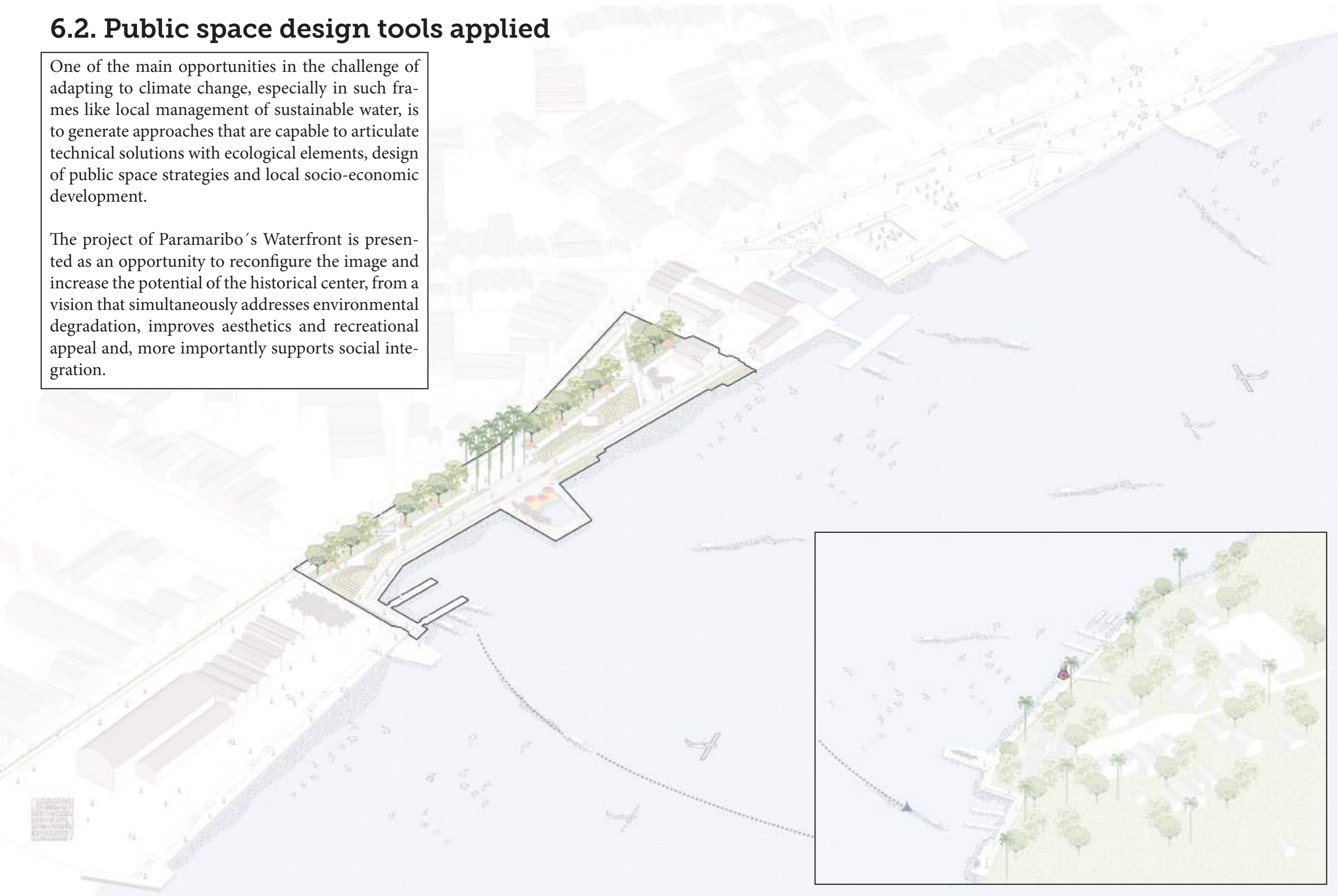
Event stage

Floating gardens

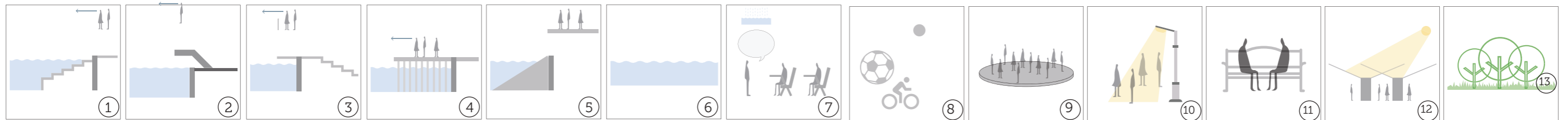
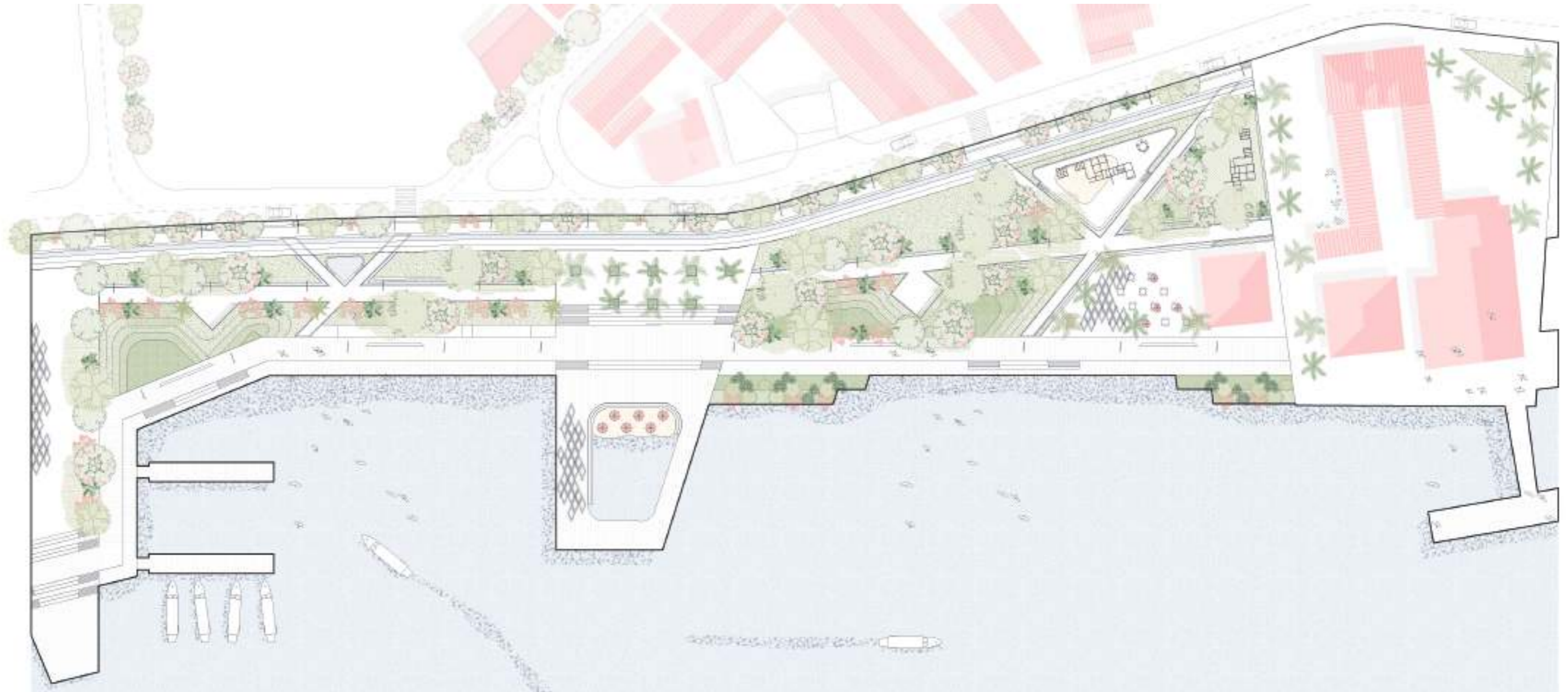
6.2. Public space design tools applied

One of the main opportunities in the challenge of adapting to climate change, especially in such frames like local management of sustainable water, is to generate approaches that are capable to articulate technical solutions with ecological elements, design of public space strategies and local socio-economic development.

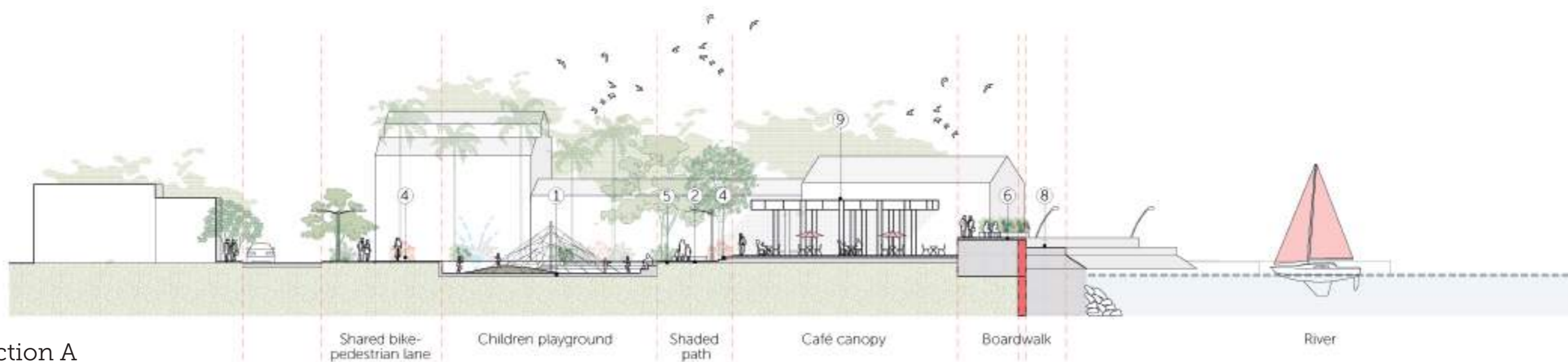
The project of Paramaribo's Waterfront is presented as an opportunity to reconfigure the image and increase the potential of the historical center, from a vision that simultaneously addresses environmental degradation, improves aesthetics and recreational appeal and, more importantly supports social integration.



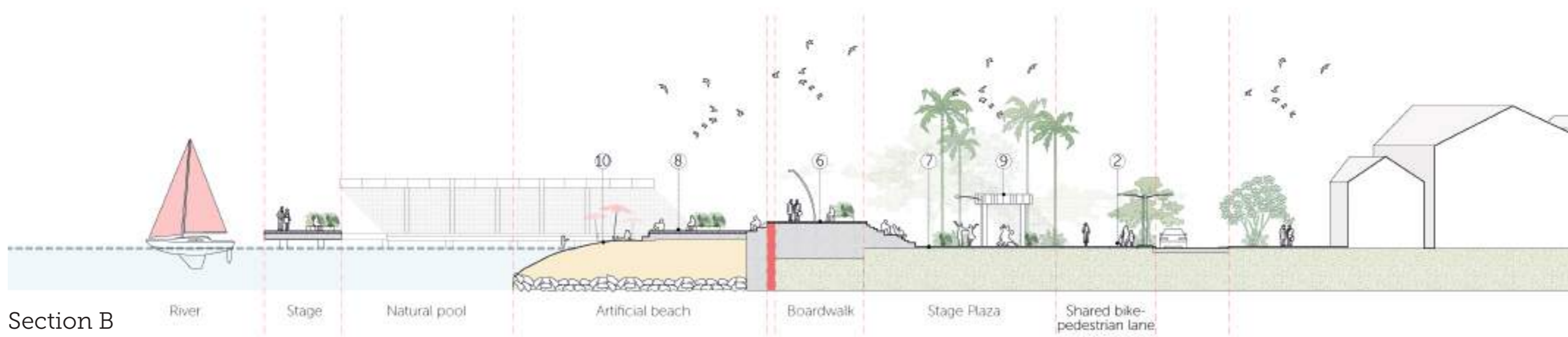
6.3. Waterkant Events Park: A linear strategy along the riverfront



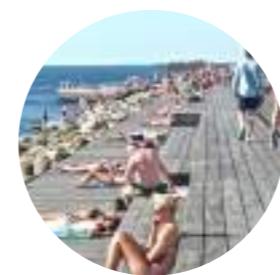
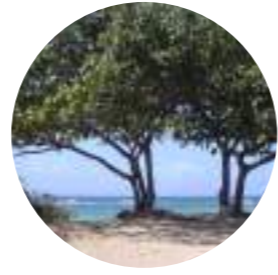
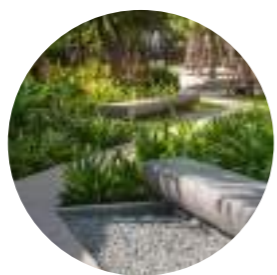
Waterkant Events Park includes an integrated storm water management and public space design. The creation of a vital waterfront demands strategies to re-connect the city with the river by adapting the concrete retaining wall to enhance the quality of public areas as well as design strategies that manage storm water runoff.



Section A



Section B



1. Sports/playfield combined with retention pond

2. Shaded paths with clear sights

3. Shaded benches along edges

4. Green and flowering plant covers

5. Multi-stemmed trees with wide canopies

6. Leveled & continuous boardwalk

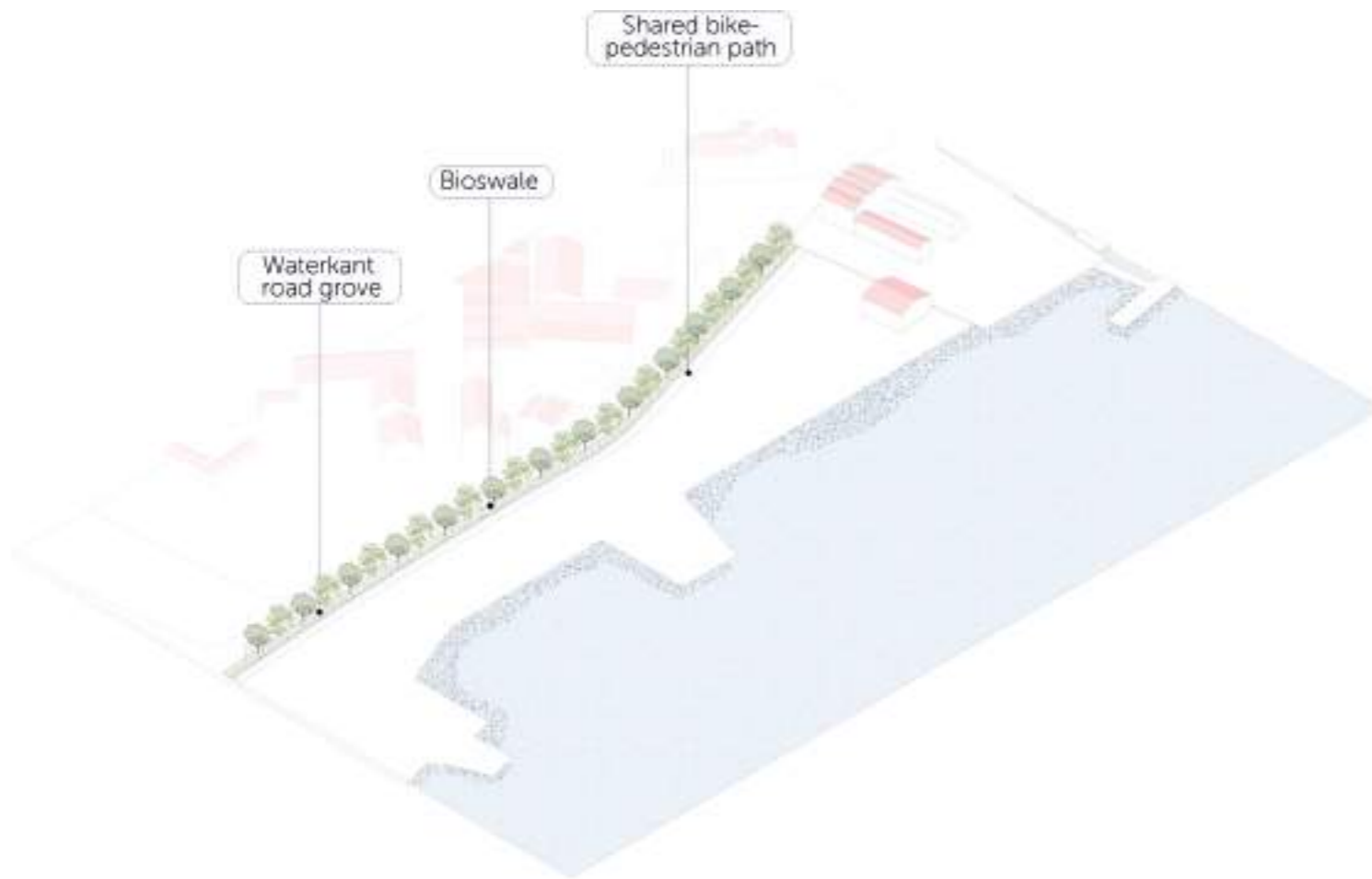
7. Open flexible plaza

8. Wooden deck in different levels

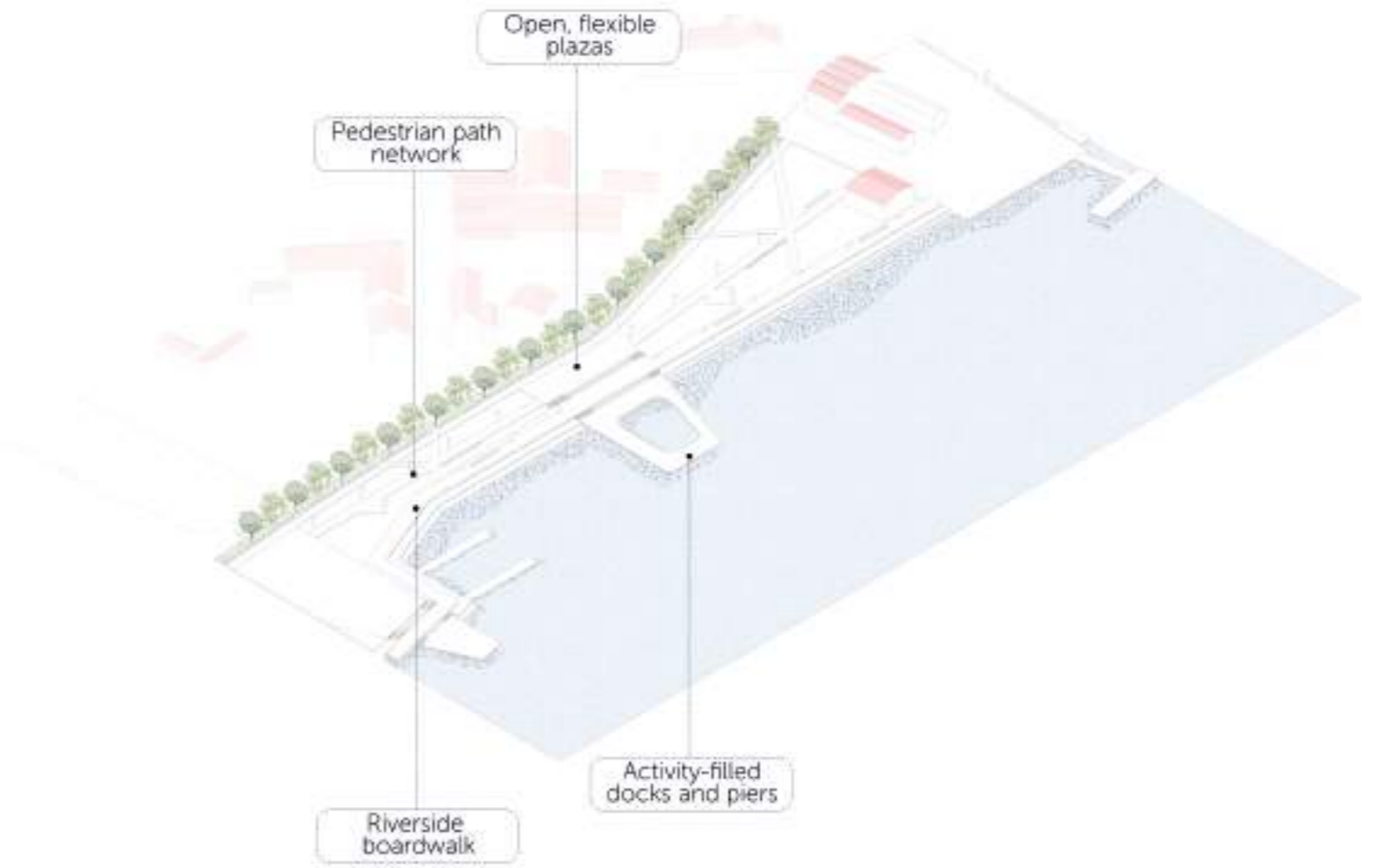
9. Multifunctional Canopy

10. Spots for comfort & sunbath

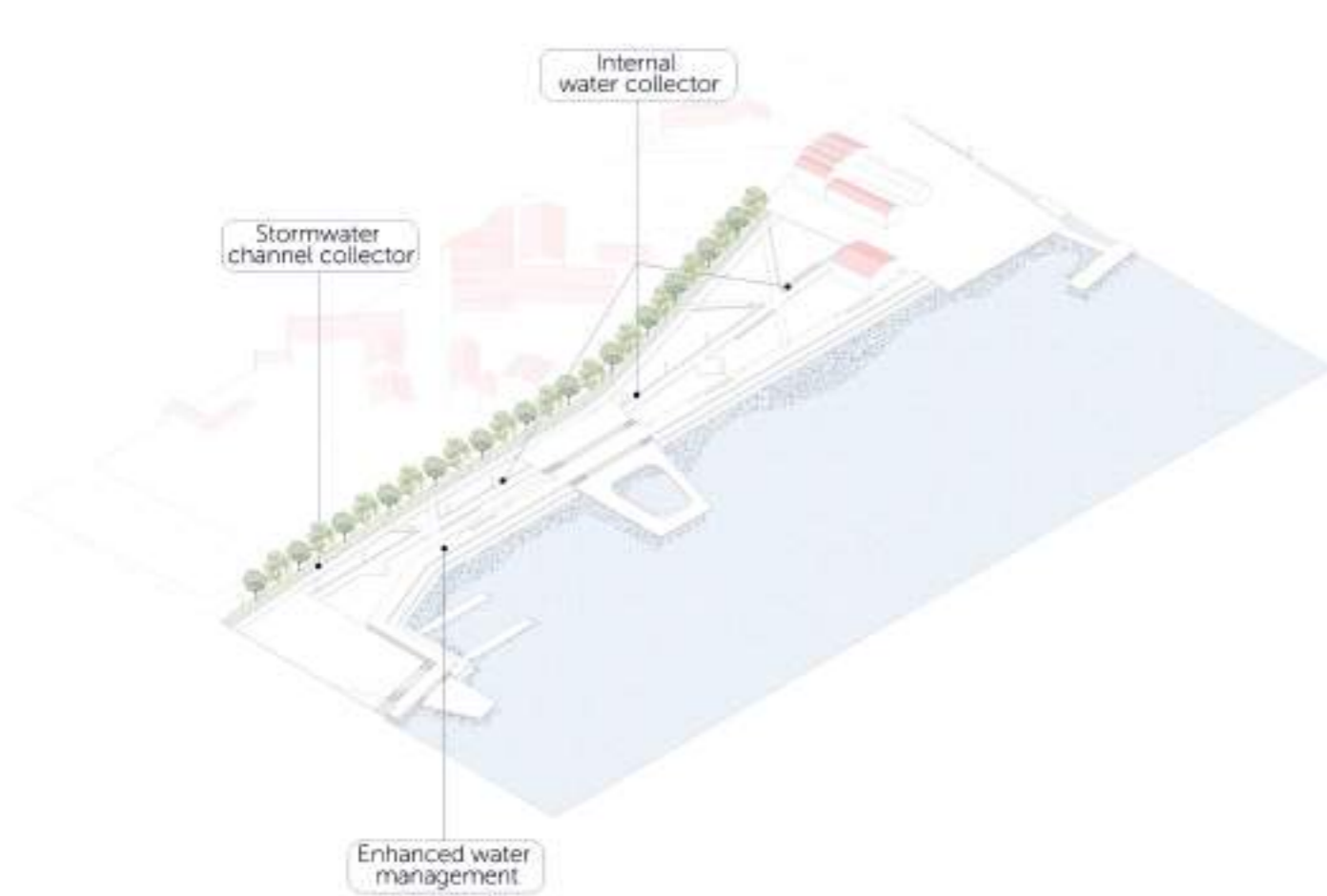
6.4. Public space design composition



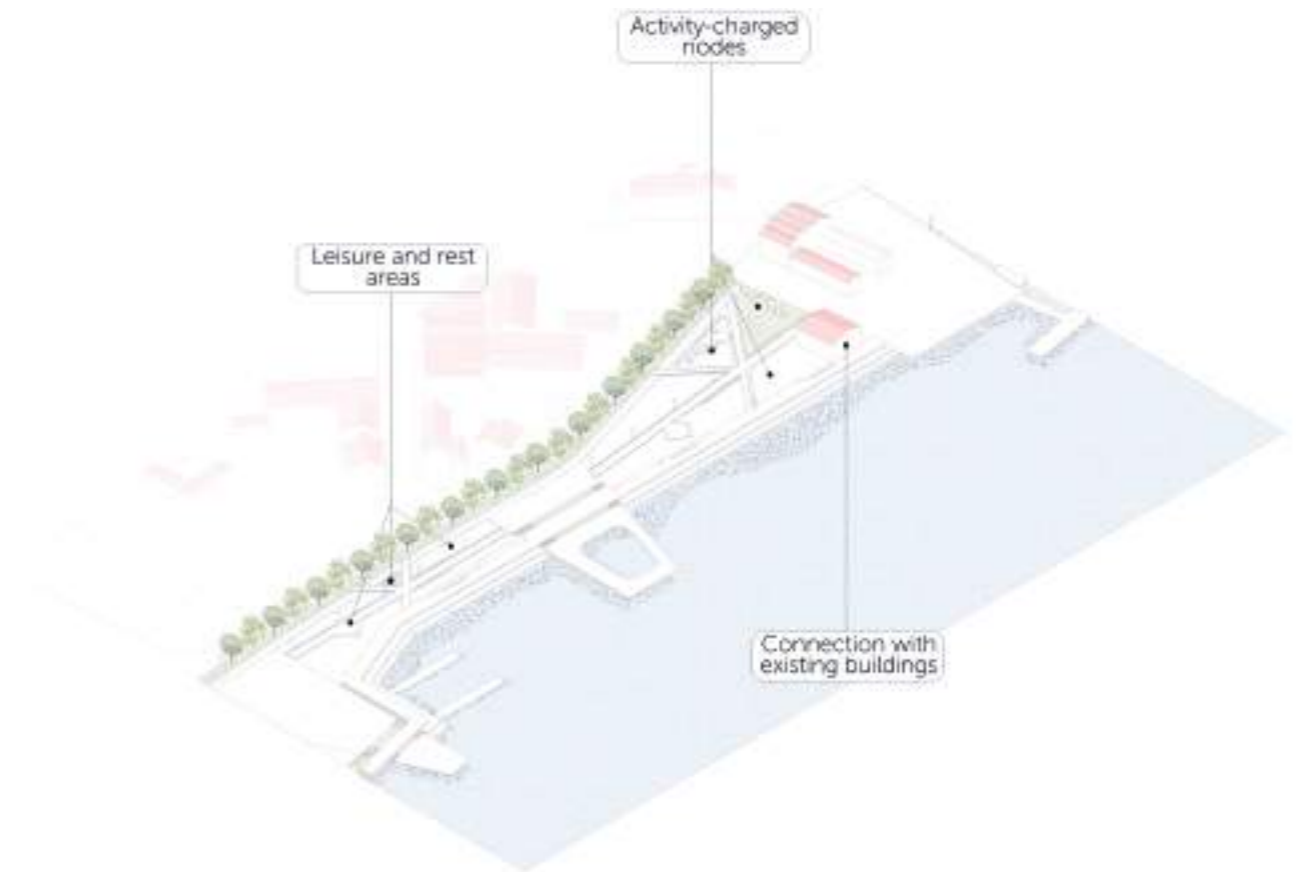
1. The Waterfront grove constitutes a new face towards the city, connecting Fort Zeelandia and the Central Market through a protected, shaded pedestrian path. A bioswale serves acts as a barrier between the cars and pedestrians, while also filtering water to the storm water channel collector.



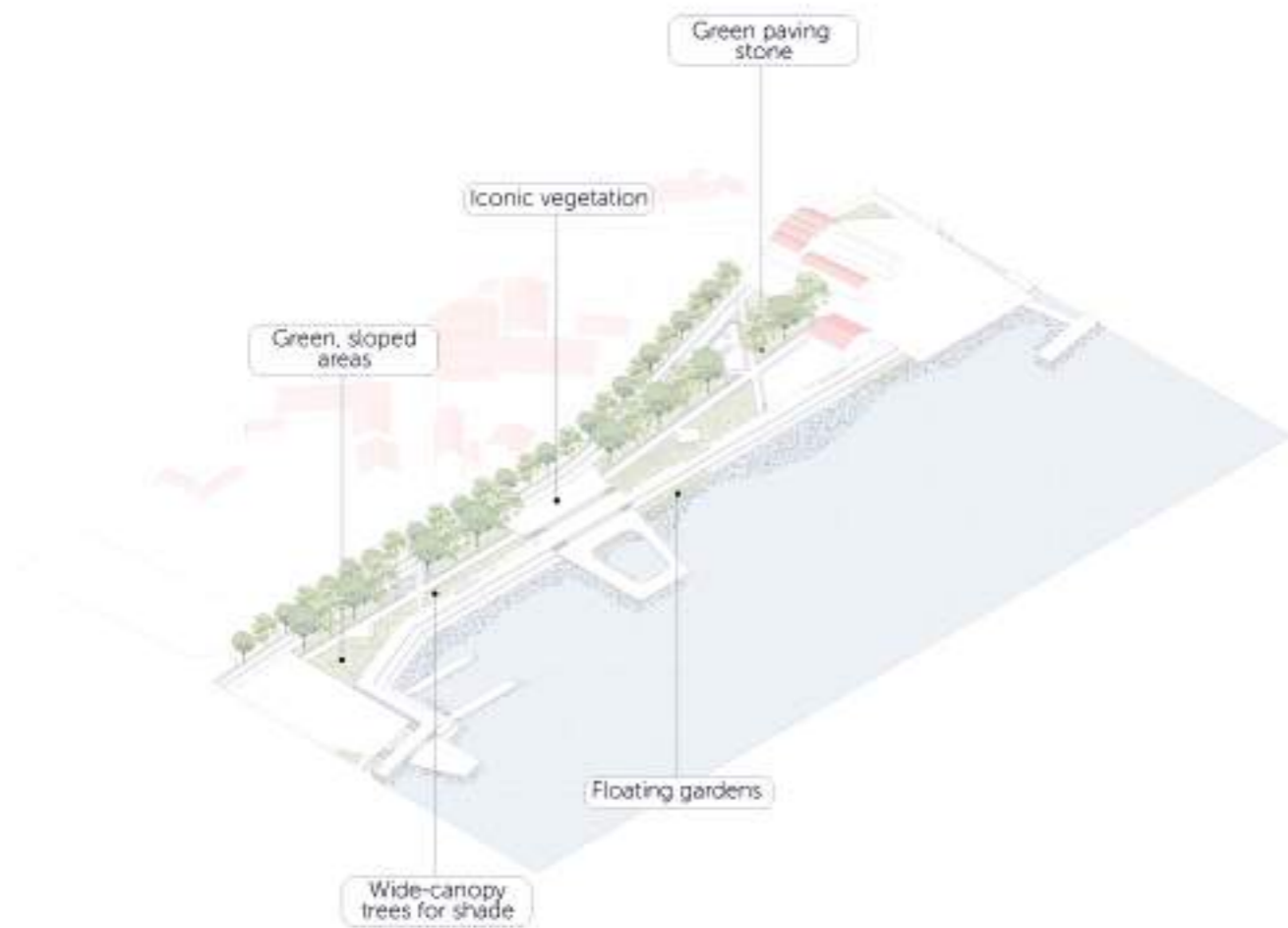
2. A riverside boardwalk is proposed as an adaptation strategy of the retaining concrete wall, thus turning the water management system into a public space network. Joining the boardwalk, a new pedestrian path infrastructure and a series of open plazas connect each phase of the project.



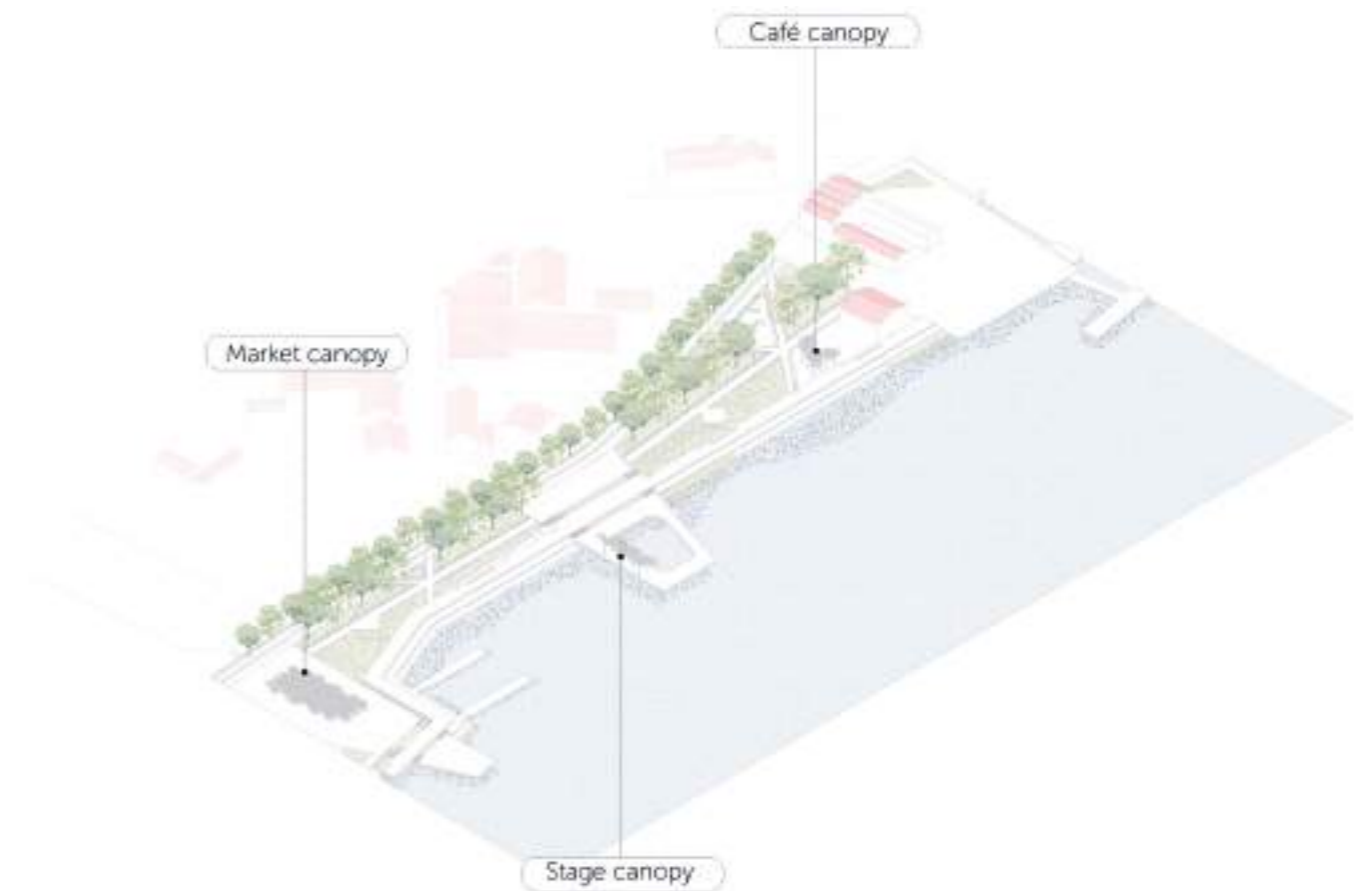
3. The waterfront stormwater channel collector filters, delays and drains the urban runoff from waterkant street and the waterkant park. The channel takes the water to the transportation hub, where a water pump will flow water into the river.



4. A diverse, activity rich program is laid along Waterkant, ensuring security and diversity within the users. Leisure and rest areas join the active program, while making the most of the proposed vegetation and its shade.

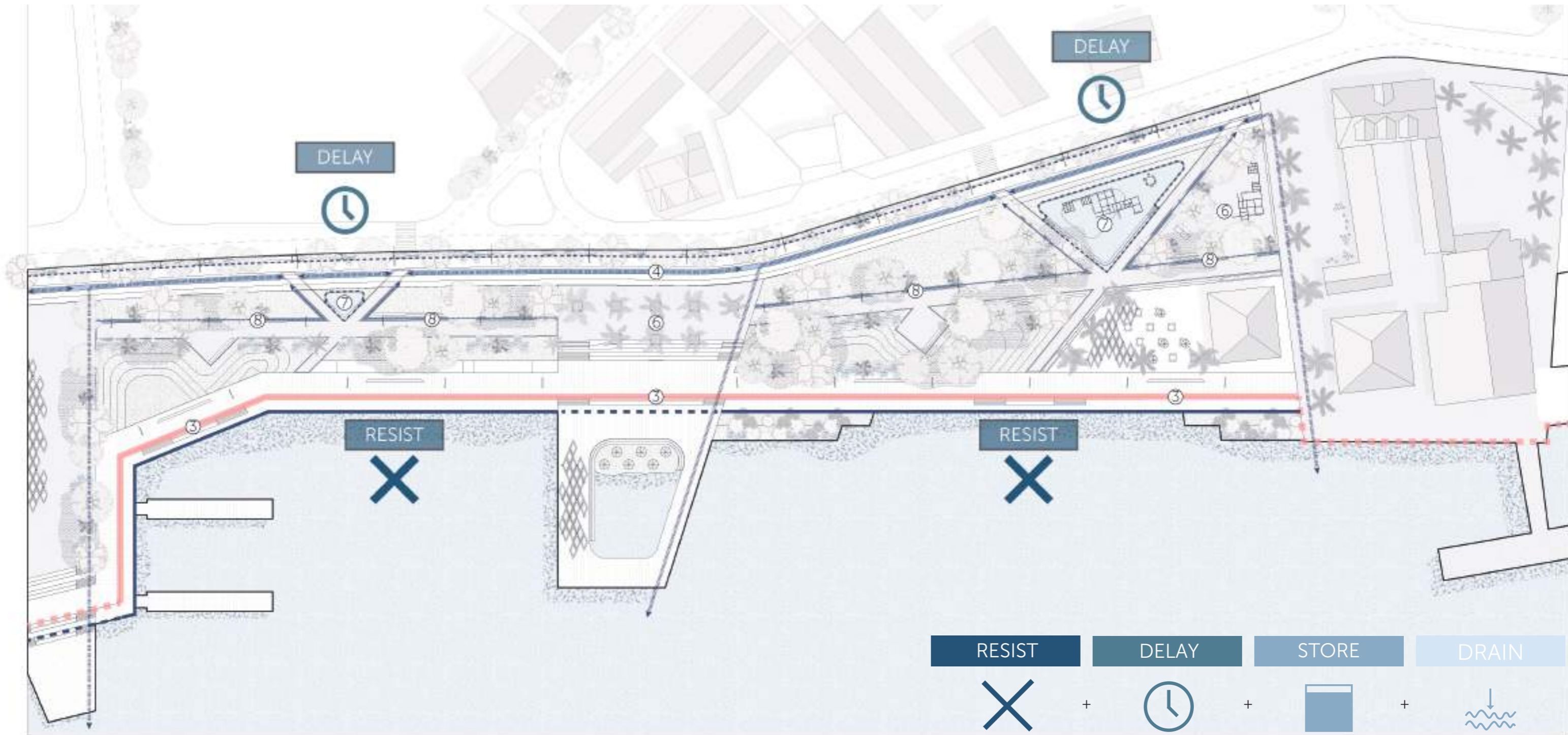


5. A constructed topography re-connects in a sensitive way the river and the embankment, providing public space with a direct relation with the river. Green sloped areas will redirect water into the internal storm water collector and the retention ponds.

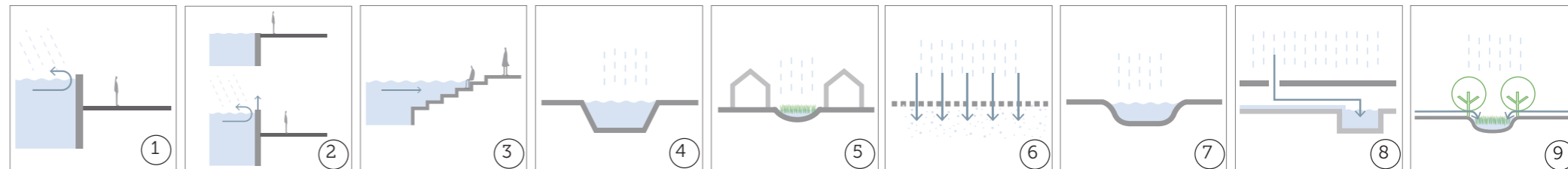


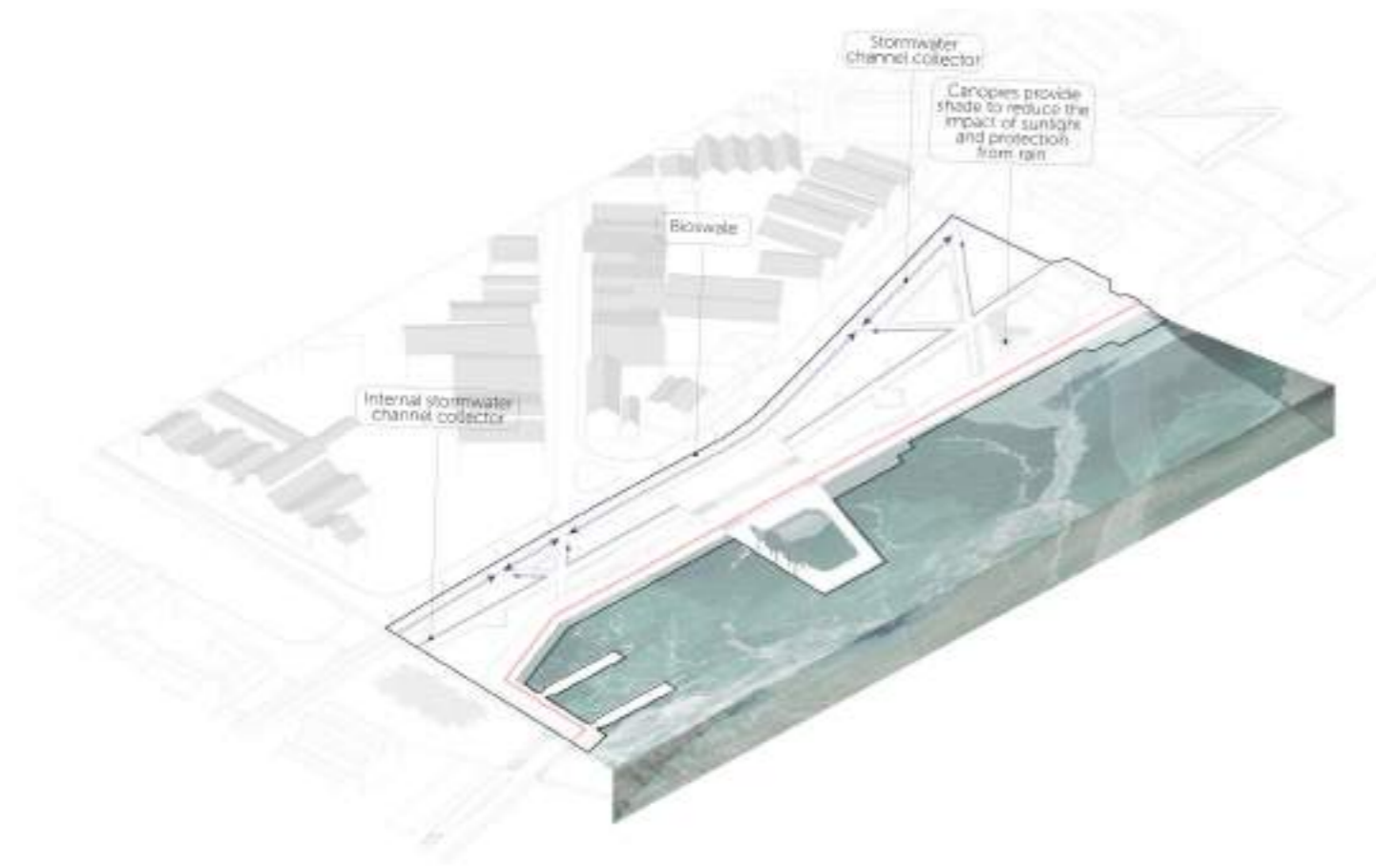
6. A system of modular, flexible and open canopy systems will provide shade for different activities, and will house spectacles, commerce and play while consolidating distinguishable, iconic elements within the Waterfront.

6.5. Sustainable Water Management Strategy

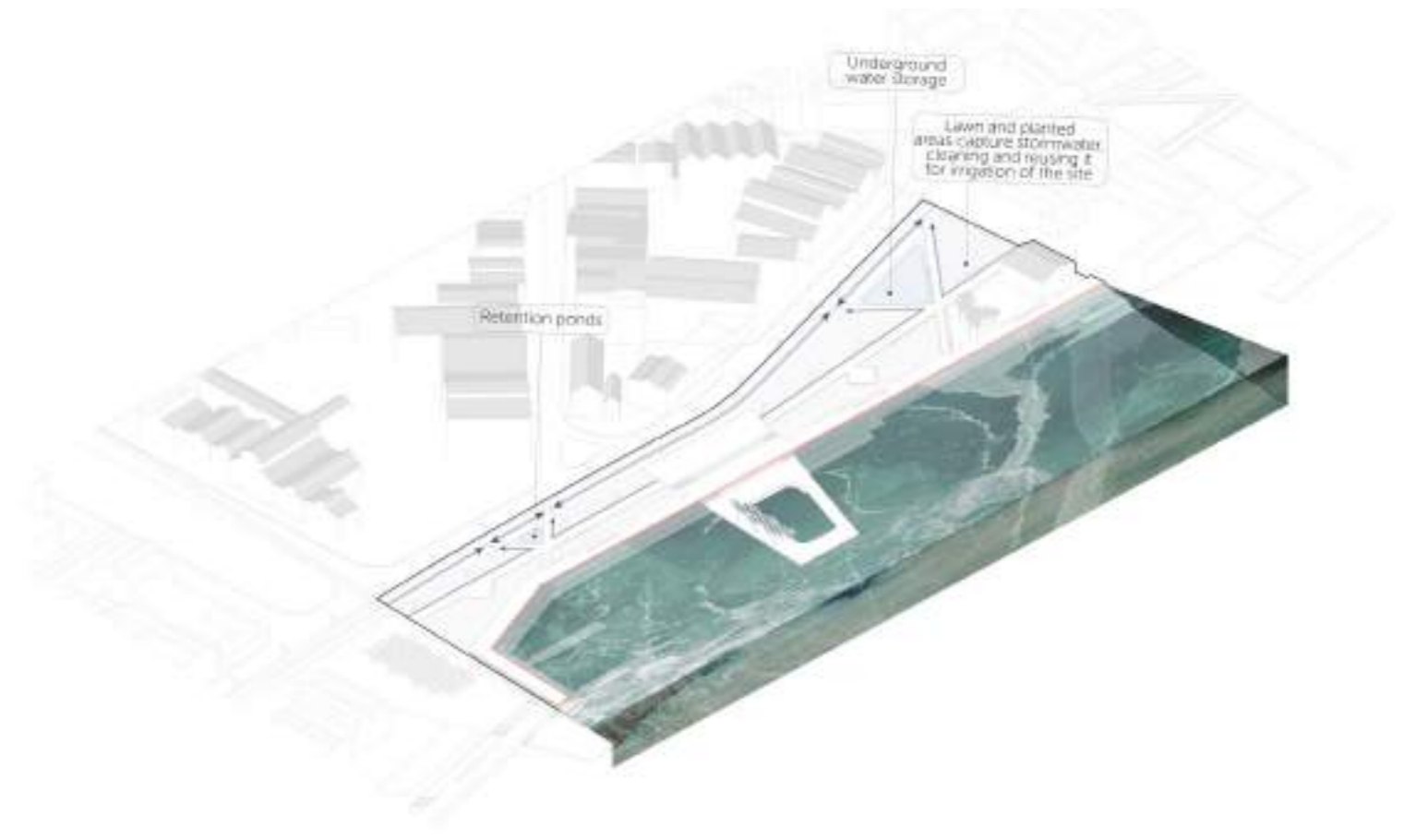


The proposal's main strategy is to create sloped topographies that elevate public space over the retaining wall, creating a direct relation with the river while protecting the border from floods and erosion, focused on sports and leisure.





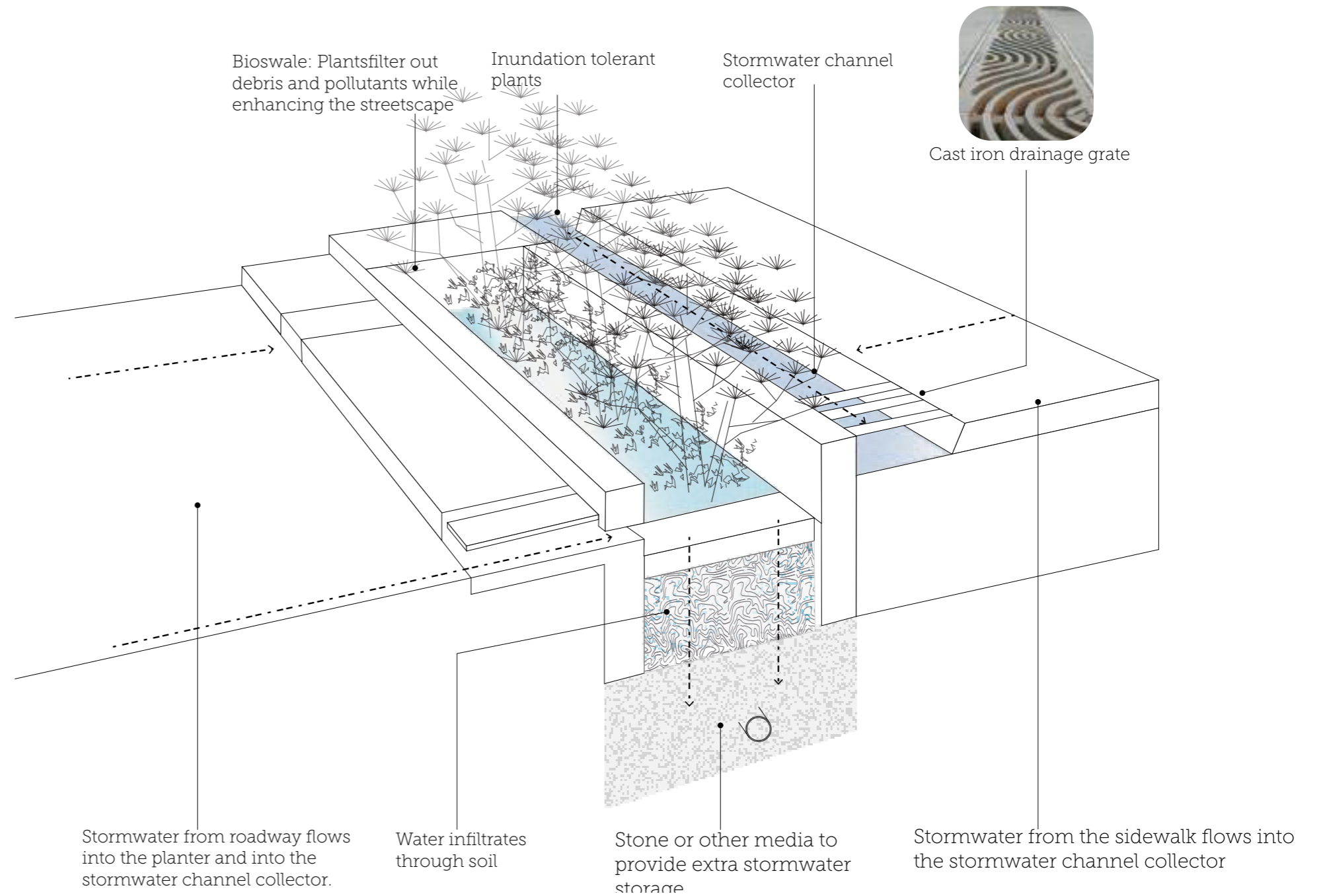
Waterkant Park on a dry day



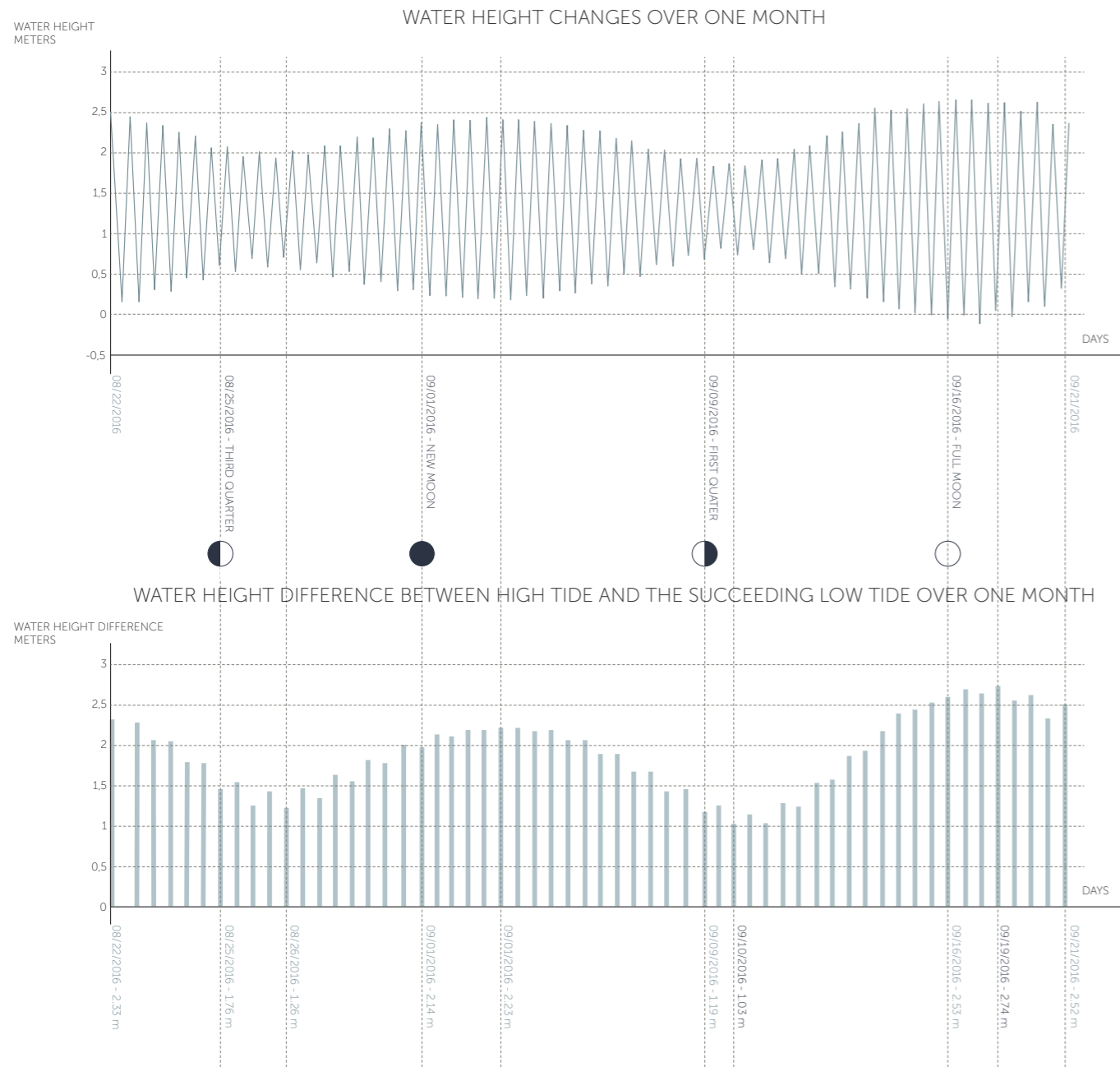
Waterkant Park on a rainy day

Stormwater management strategies

The water circulation system prevents stagnant water while creating larger surface areas to store water in extreme flood conditions. Lawn and planted areas capture stormwater, the skatepark areas as well as the basketball courts will store the peak rainfall while the internal channel collector will direct water runoff into the stormwater channel collector. Permeable materials will increase the soil infiltration capacity to reduce peak runoff and promote water recharge.



6.6. Awareness and educative strategies to reconnect the city with the river



¹ Source: The Consultant, based on data from MLTDE.



One way to reinforce citizens' relation with Suriname River is the visualization of the river's changing water levels. The visualization of the river cycles is not only pedagogical but is also a tool for city officials to keep track of the river's dynamics.



i). Splash Screen

It will be the first screen that the user will see when entering the site and must scroll until the CTA button to access the home page. It will be composed of a paragraph of text and a CTA, both editable.

The splash screen will be animated.



ii). Home (Discussion map section)

In this section the user will find a burger menu in the upper right part of the screen. Also the user will find a map with clickable pins from which you can access the landing of each place. The user will also have 3 CTA buttons to access the landings of past, present and future that will be explained later. Title texts and CTA buttons will be editable.

The pins can be located from the CMS. The map will not be embedded in Google Maps.

In the lower part the user can scroll to see the comments that other users have left. These comments will happen one by one automatically, the last ones published will be seen first. This field will always be fixed and when the user clicks on the comment he will go to the landing of the comment site and will be able to see the whole discussion.

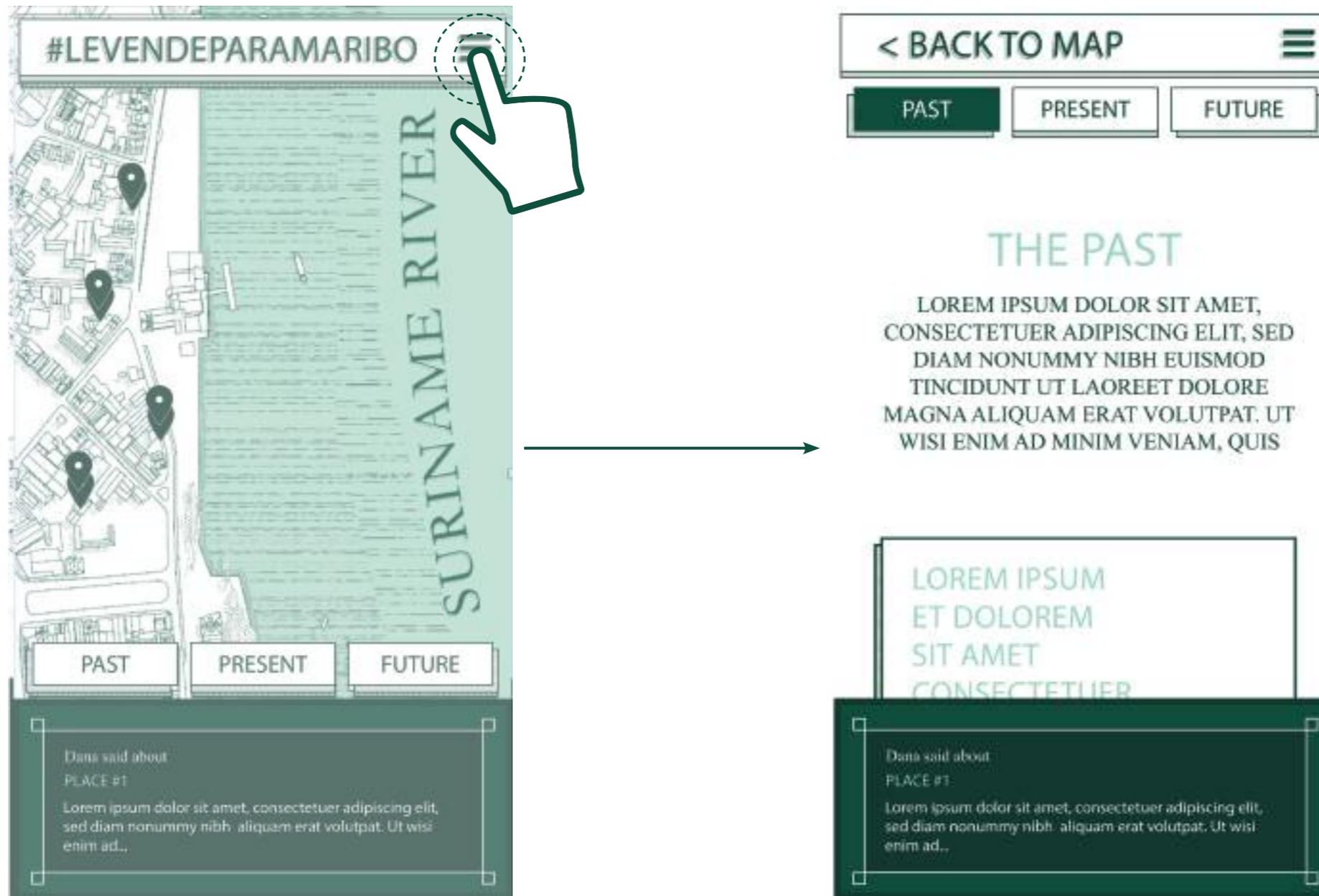


iii). Inner page of discussion map

The user can access this section once he clicks on one of the places located on the map of the home. Thought to see only one place at a time. The texts and images will be editable.

The user will always see the burger menu and the three CTA buttons past, present and future, as well as the comments field. .

In the top banner you will always have an image or video, to then see the title (name of the place) and its description.



iv). Category landing section

Landing for past, present and future sections. Once the user clicks the CTA past, present or future buttons, he will access the past, present or future landing according to what he has selected.

One inside the CTA buttons will be fixed at the top of the screen, and the user will see the title of the section and a descriptive text. Then you can see the post published in the section. All the contents will be editable.



<https://www.welt.de/>



<https://www.nytimes.com/>



< BACK TO MAP

EXIST PRESENT FUTURE

THE PAST

LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT, SED DIAM NUNTIUM NIBI EUISMOD. TINCIDUNT UT LAOREET ENHORE VADIA ALIQUAM ERAT VOLUTPAC UT WEB ENIM AD MENI VENIAM, QUIB

LOREM IPSUM ET DOLOREM SIT AMET

LOREM IPSUM DOLOR SIT AMET

LOREM IPSUM ET DOLOREM SIT AMET CONSECTETUER

LOREM IPSUM DOLOR SIT AMET

ZWERVERS KREGEN ETEN AAN DE WATERKANT

HOW IS AN URBAN DEVELOPMENT PROJECT SAFEGUARDING A WORLD HERITAGE SITE IN SURINAME?

BID

horizontal

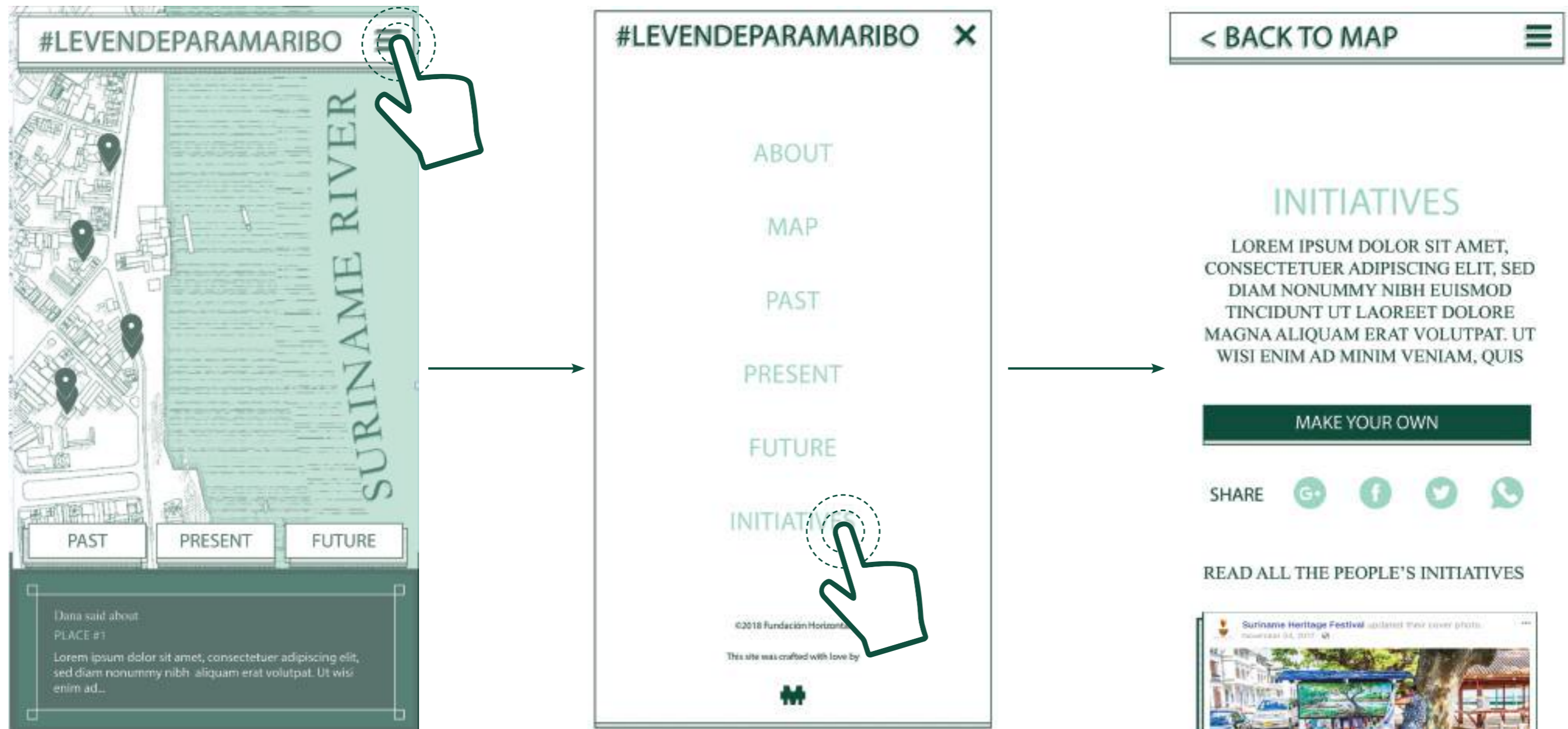




v). Post inner page

Once the user clicks on any of the posts in the past, present or future sections, he will enter the post inner page, where he will see the three buttons CTA past, present and future fixed at the top of the screen, the burger menu and the comments field at the bottom of the screen. The user can scroll to see the comments that other users have left.

Each post will have a title, a subtitle and a text body, in addition to the option to upload video and images for each of them. The images, videos and texts will be editable.



vi). Initiatives

In this section the user will see the title of the section, a descriptive paragraph and a CTA button “Make your own” that takes the user to the Facebook fan page where users share their initiatives. The initiatives that the user sees in this landing are embedded from Facebook. The title, descriptive paragraph and name of the CTA button are editable. The user can share this landing on social networks.

In the lower part of the landing the user will find a CTA that allows him to see and comment. The text of this button will be editable. The user can share the comments on social networks.



facebook



twitter



youtube

< BACK TO MAP

INITIATIVES

LOREM IPSUM DOLOR SIT AMET, CONSECTEUR ADIPISCING ELIT, SED DIAM NOUNIMY NBIH ELITMROD TINCIDUNT UT LAORE ET DOLORE MAGNA ALQUAM ERAT VOLUTPAT, UT WISI ENIM AD MINIM VENEAM, QUIS

MAKE YOUR OWN

SHARE

READ ALL THE PEOPLE'S INITIATIVES



LOREM IPSUM ET DOLOREM SIT AMET CONSECTEUR... READ MORE

LOREM IPSUM ET DOLOREM SIT AMET CONSECTEUR... READ MORE

LOREM IPSUM ET DOLOREM SIT AMET CONSECTEUR... READ MORE

LOREM IPSUM ET DOLOREM SIT AMET CONSECTEUR... READ MORE

This project is possible thanks to the support of





vii). About

In this section the user will see the description of the project. The texts will be editable and you can create as many text, video and photo modules as you wish.

In the lower part when scrolling, the user will find a contact form, in which the user must enter their personal data and the question or message that they want to send to the people in charge of the project.



viii). Landing make a comment

In this landing the user leave your comments. The title and description text will be editable.

Dana says:

LOREM IPSUM
ET DOLOREM
SIT AMET
CONSECTETUER...

[READ MORE](#)

This project is possible thanks to the support of



horizontal

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This site was crafted with love by



ix). Footer

The user will see the logos of collaborating institutions.

7.

Final technical considerations

Inputs to guide the design and construction of the Waterfront Area

5.1. Preliminary costs for Phase 1

This preliminary costs is structured by expenses per chapters of the main implementation items. Here we summarize the main costs that will be incurred during construction of phase 1. The base of this preliminary budget is the incidence percentage of each character on the final budget of projects of public spaces with the same characteristics.

This costs are calculated with a conceptual strategic design, and are directly related to the running of a project in that state of development. Final expenses will be a direct result of a later detailed design and studies, attached to a construction tender process.

WATERFRONT PARAMARIBO (PHASE 1)		
BUDGET		
1.0	Preliminary works, demolitions	USD 18.799,76
2.0	Earthworks ¹	USD 298.200,00
3.0	Foundations	USD 175.000,00
4.0	Special structures	USD 398.490,00
5.0	Exterior floors	USD 946.257,00
6.0	Plumbing (Storm water channel collector, Internal naturalized stormwater collector, Bioswales, Underground storage tanks)	USD 249.704,00
7.0	Electrical utilities and exterior lighting	USD 550.000,00
8.0	Planting	USD 285.615,00
9.0	Urban furniture	USD 180.000,00
	Signaling	USD 16.000,00
TOTAL		USD 3.118.065,76

WATERFRONT PARAMARIBO (PHASE 1)		
OVERALL AREAS FOR PHASE 1		
ITEM		AREA
1.0	Landscaping	
1.1	Green areas	1943,27 sq.m
1.2	Bioswales	292,02 sq.m
1.3	Floating gardens	293,83 sq.m
2.0	Public space	
2.1	Wooden decks (Docks and riverside board-walk)	1135,17 sq.m
2.2	Main plaza's flooring	611,64 sq.m
2.3	Pedestrian path's flooring	1095,45 sq.m
2.4	Green paving areas	386,98 sq.m
2.5	Gravel (Children's playground)	331,06 sq.m
2.6	Synthetic floor (Multi-sport courts)	0
2.7	Bike lane network	243,57 lm
3.0	Water management strategies	
3.1	Stormwater channel collector	178,75 lm
3.2	Water storage deposits	300 sq.m
4.0	Buildings and pavilions	
4.1	Modular canopies	78,69
TOTAL AREA		7422,21 SQ.M